

Fig. 1A

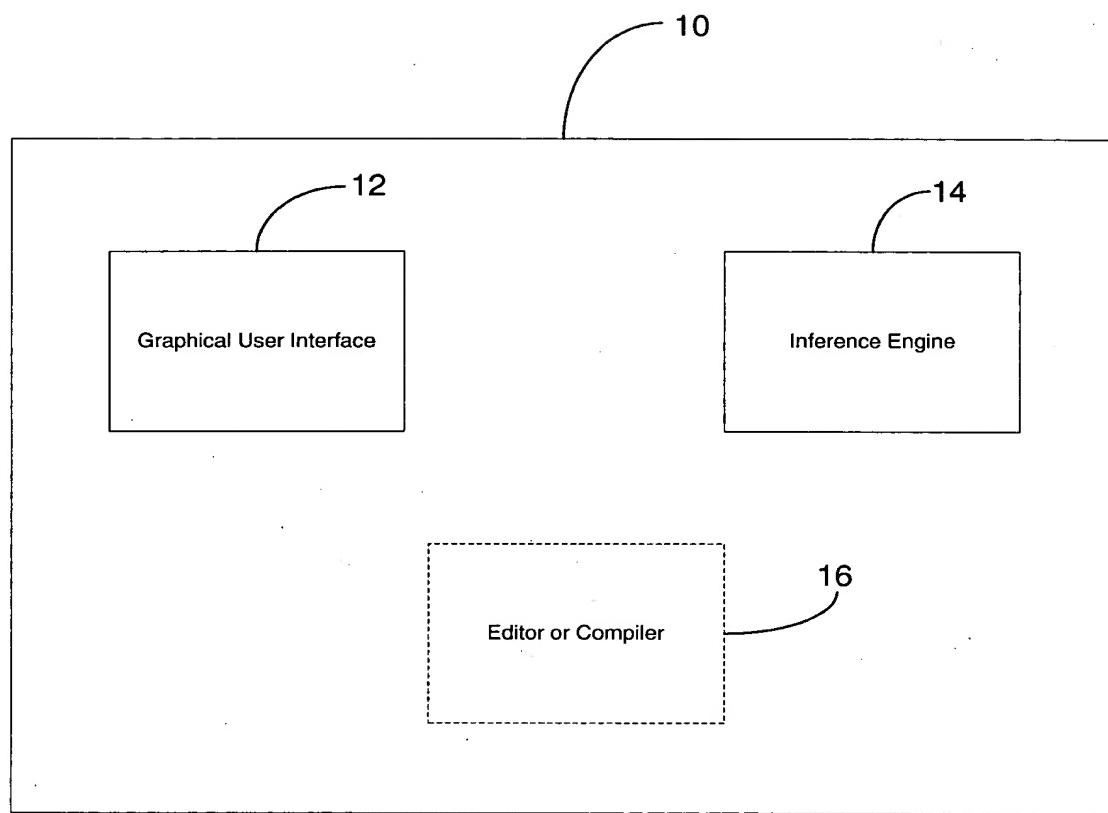


Fig. 1B

Fig. 2A

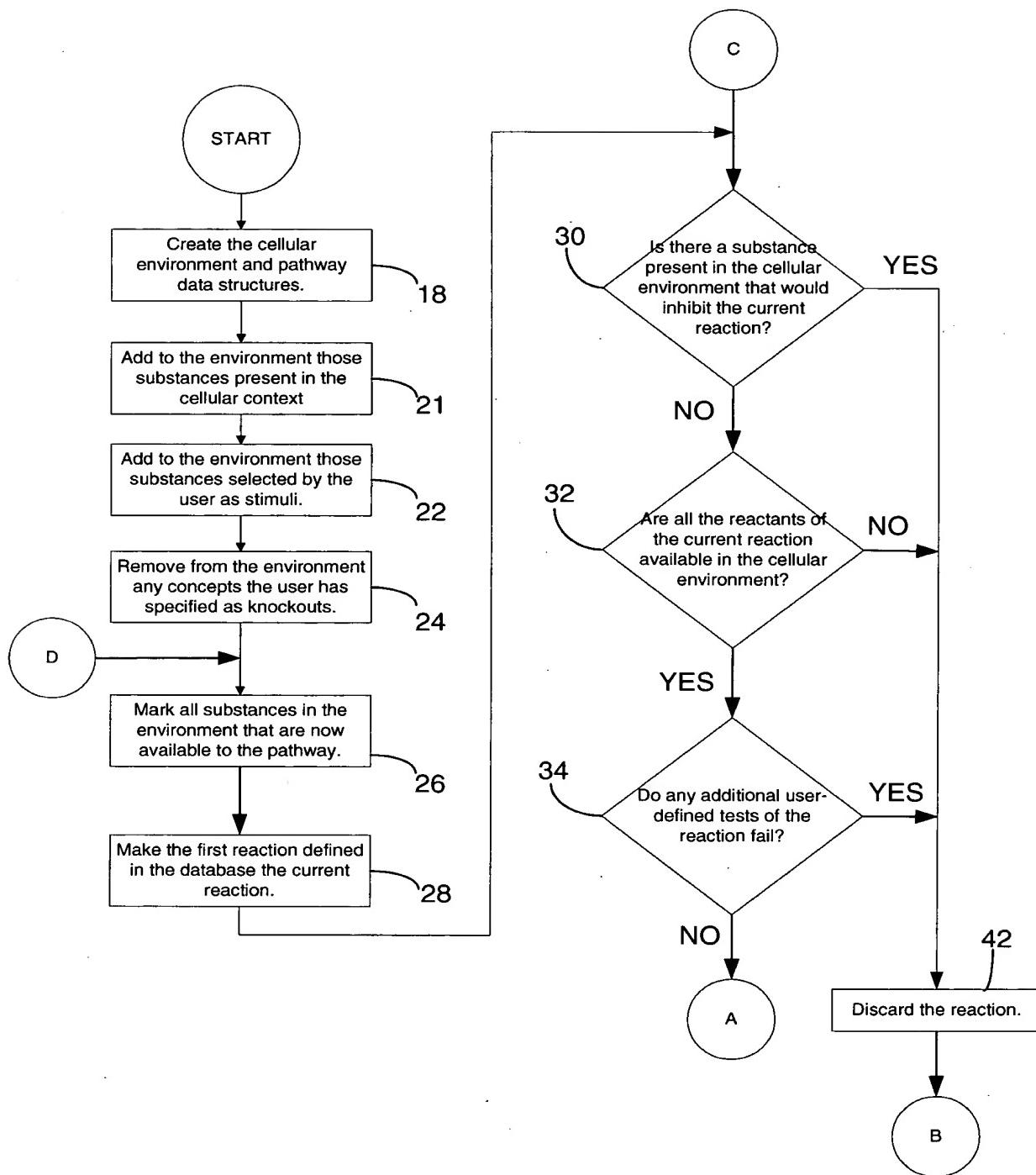


Fig. 2B

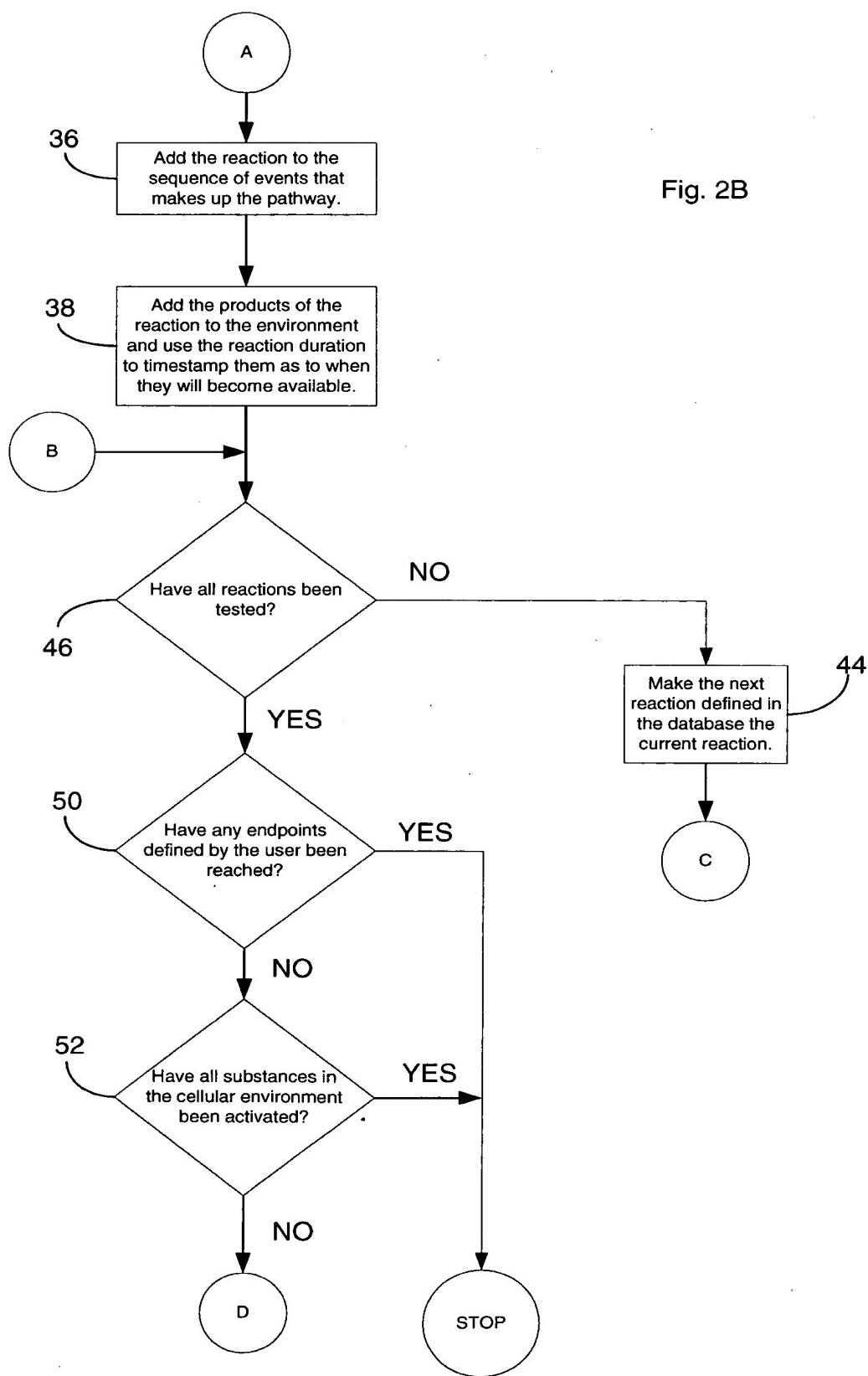


Fig. 2C

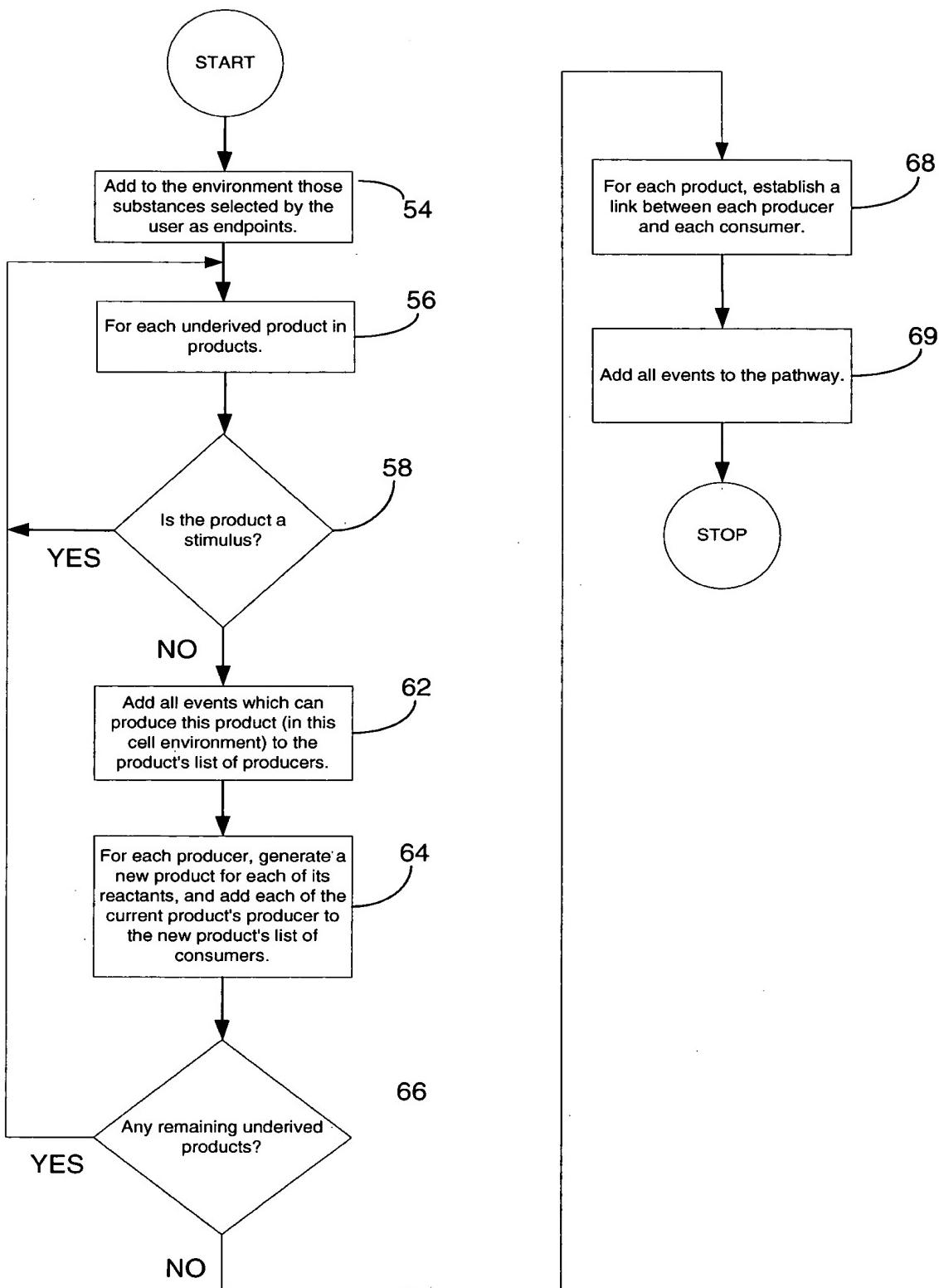


FIGURE 3

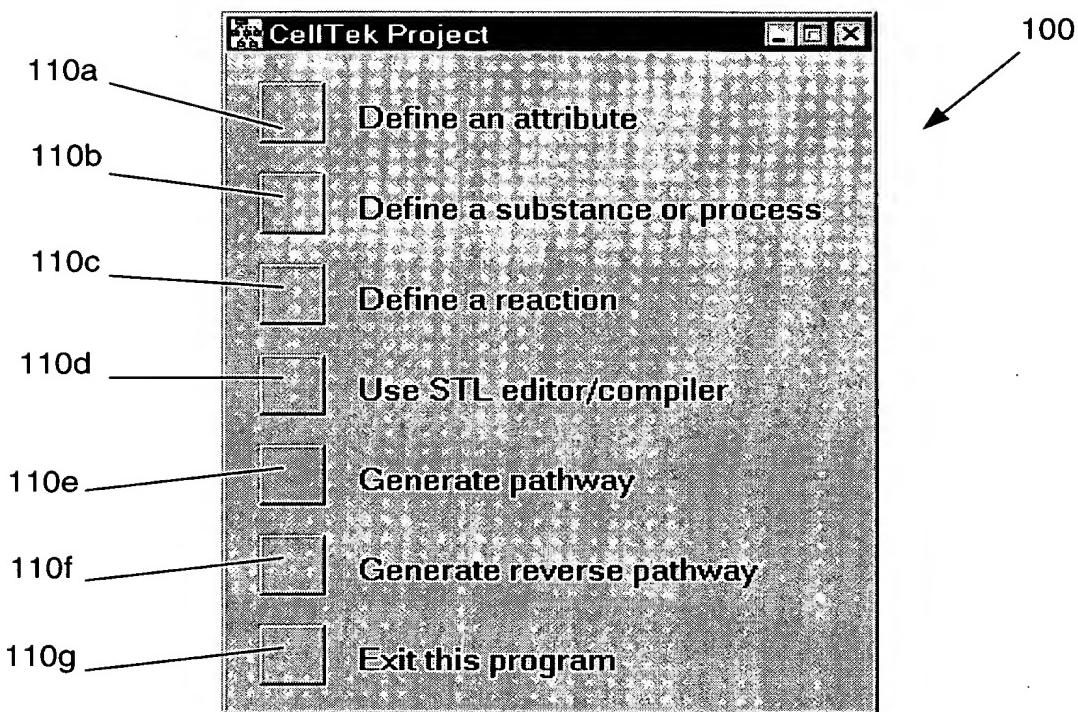


FIGURE 4A

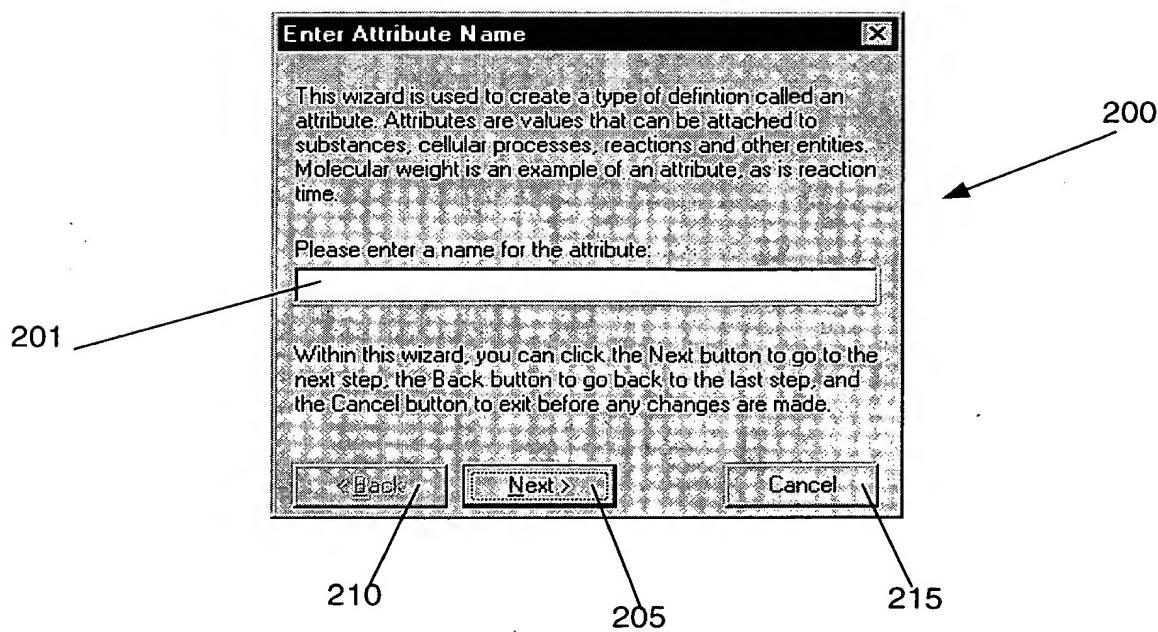


FIGURE 4B

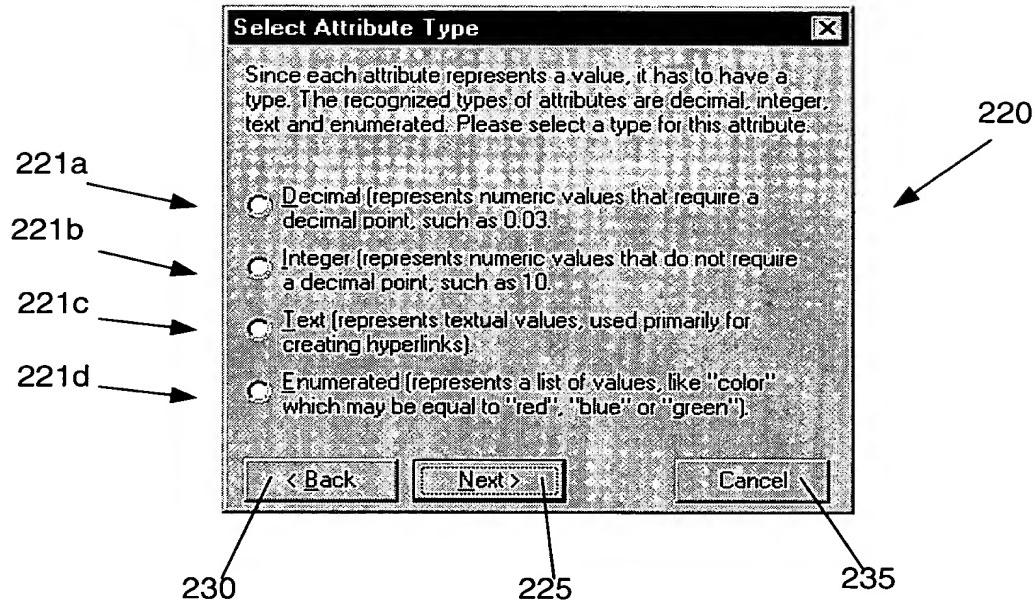


FIGURE 4C

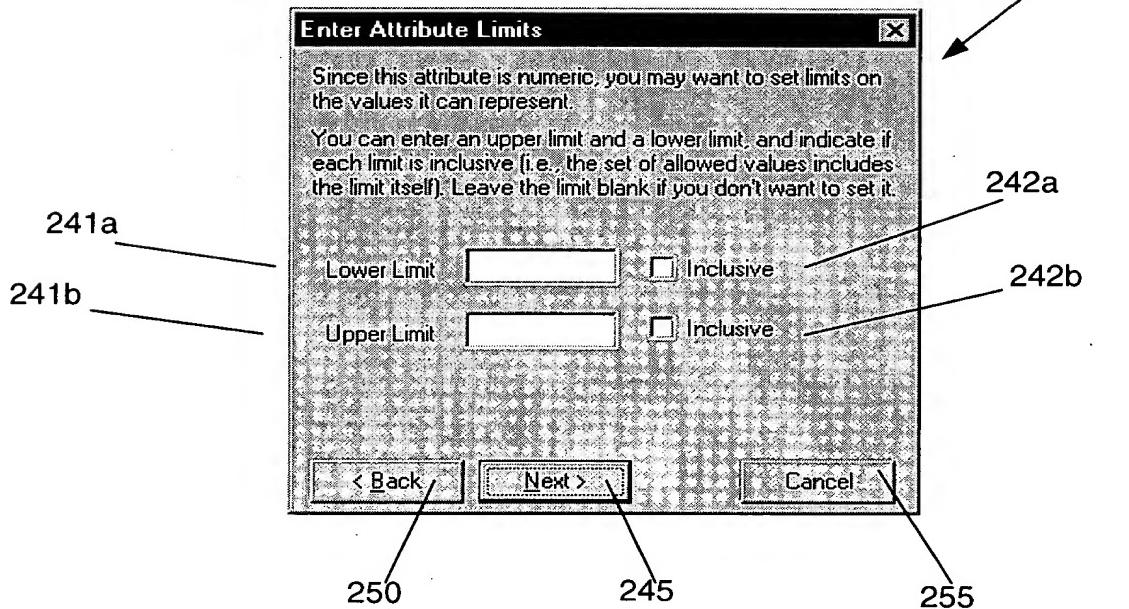


FIGURE 4D

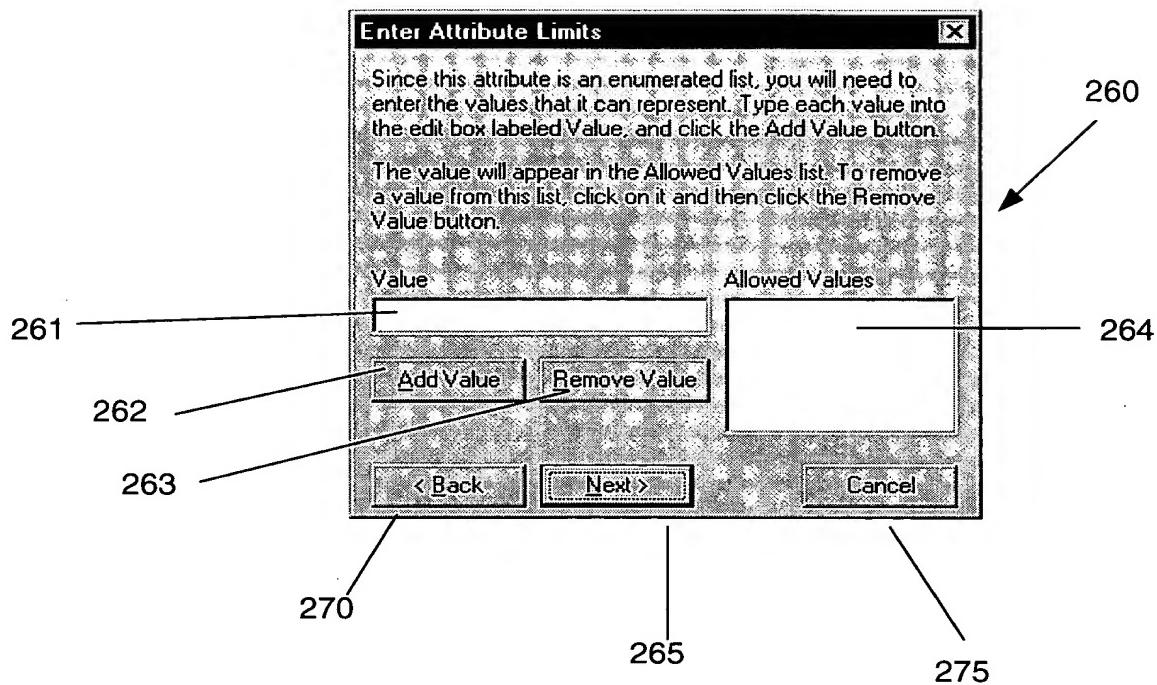
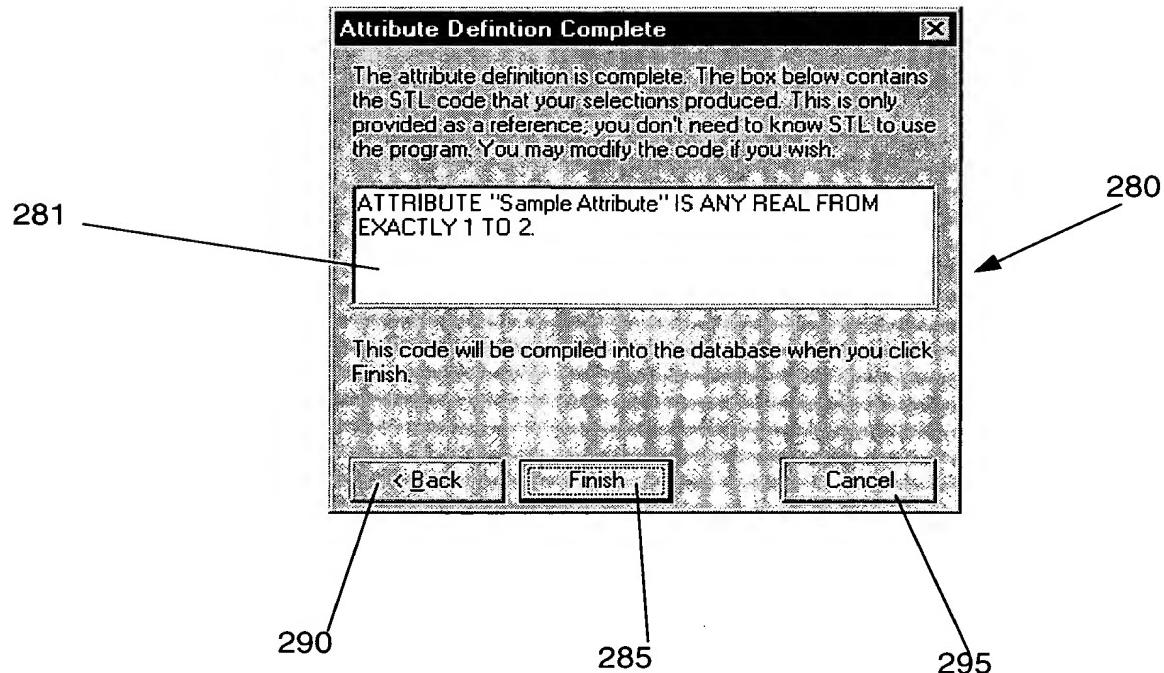
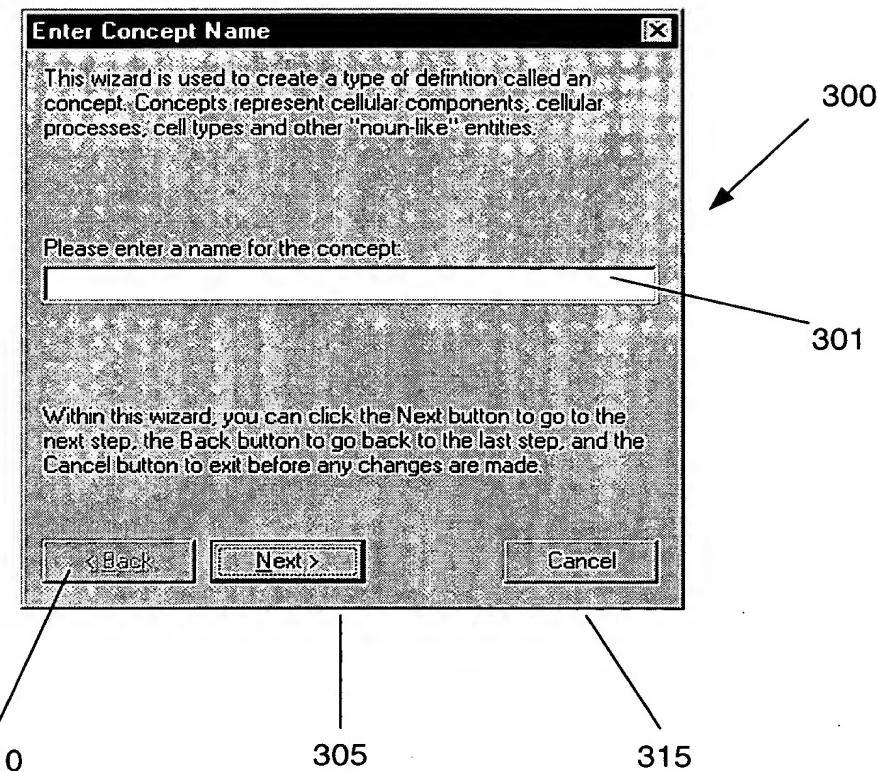


FIGURE 4E



**FIGURE 5A**



**FIGURE 5B**

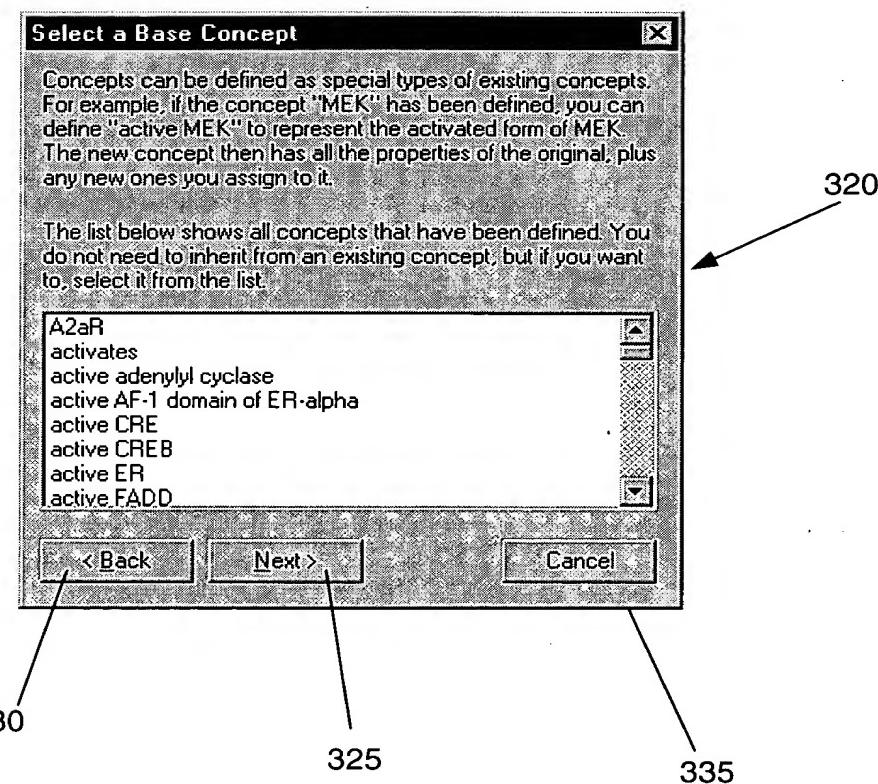


FIGURE 5C

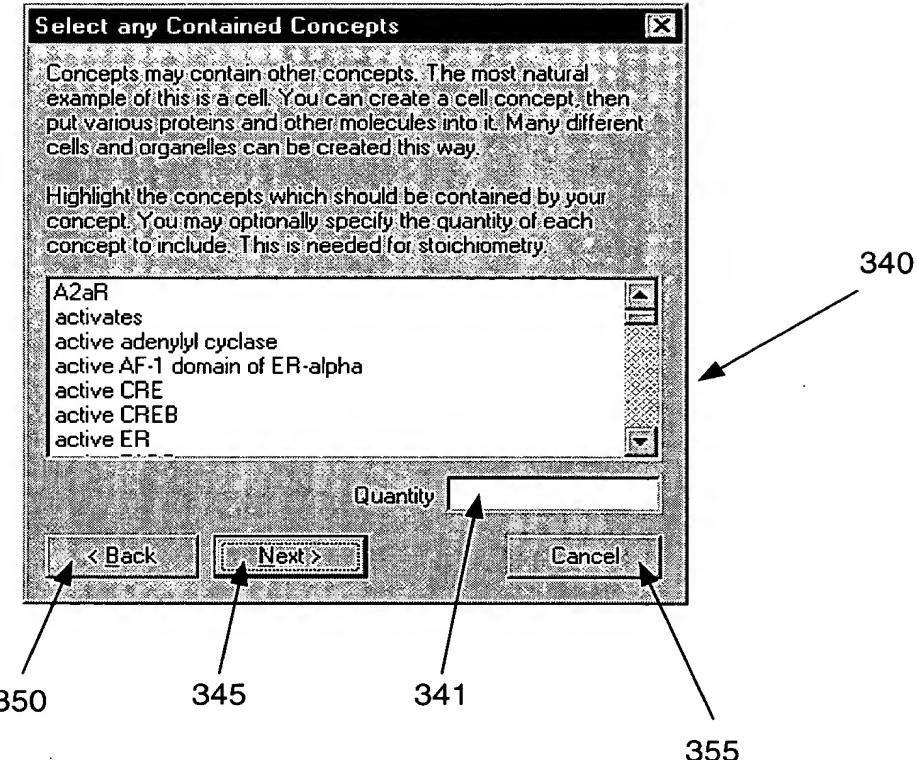


FIGURE 5D

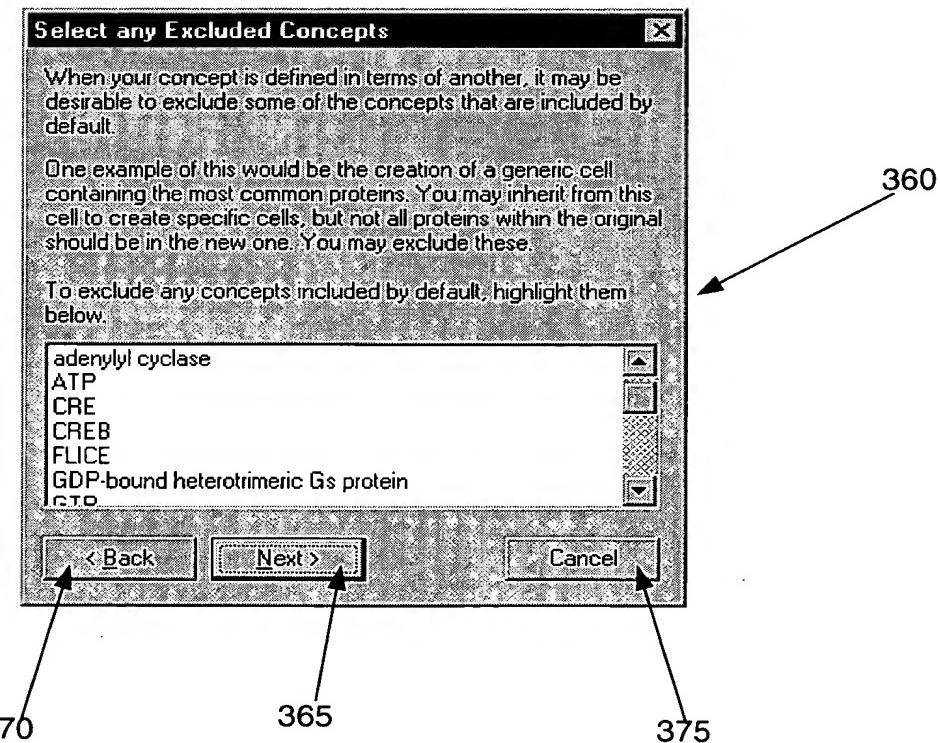


FIGURE 5E

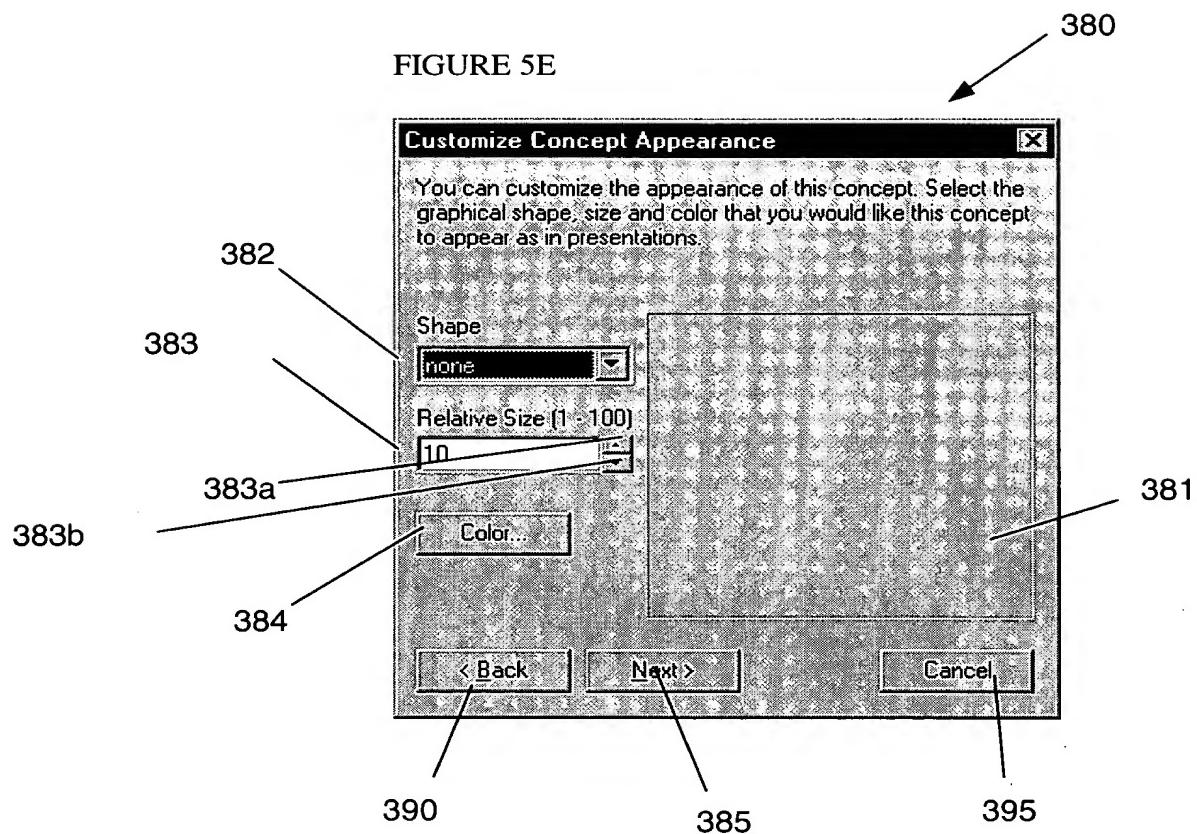


FIGURE 5F

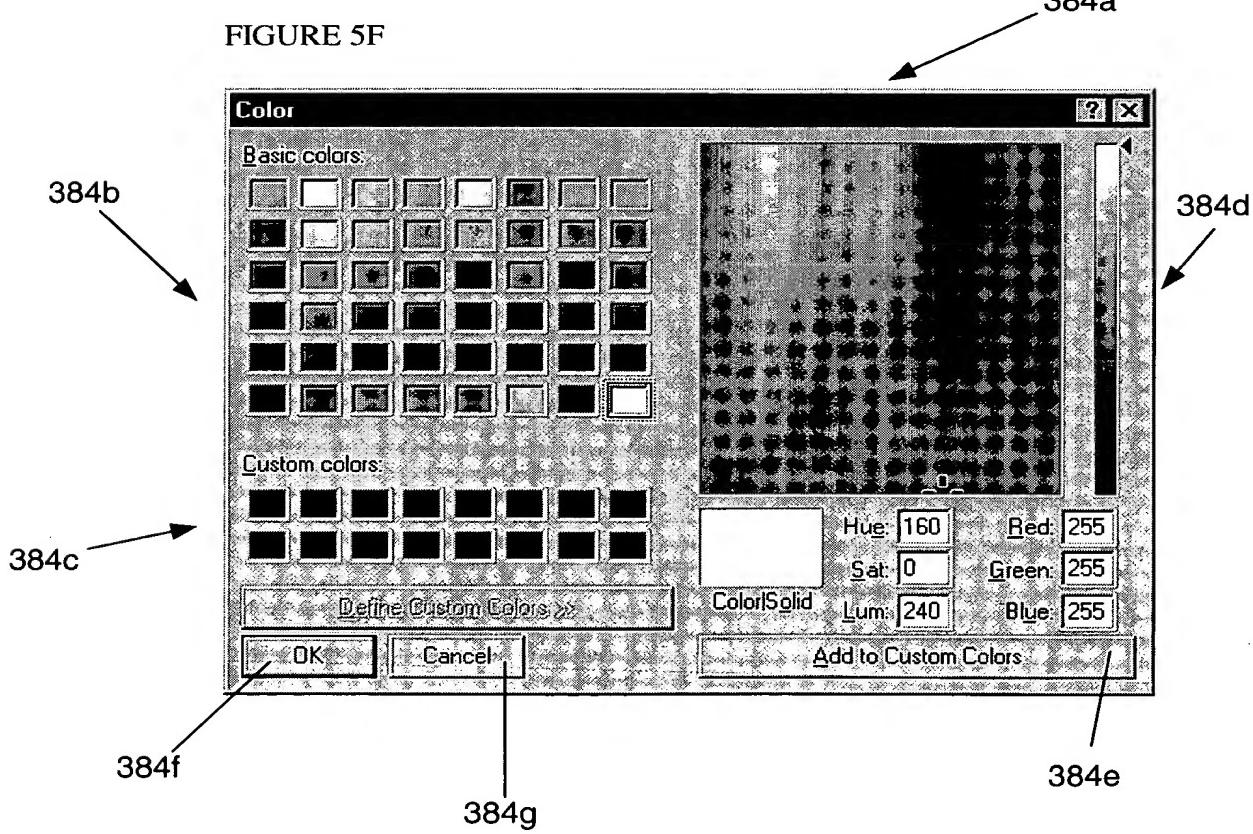


FIGURE 5G

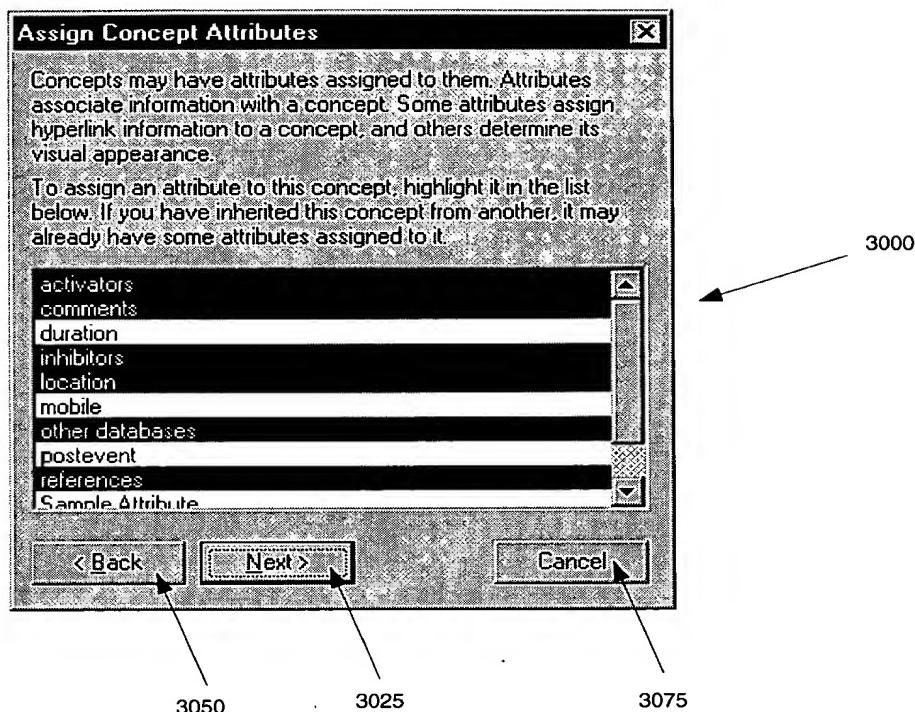


FIGURE 5H

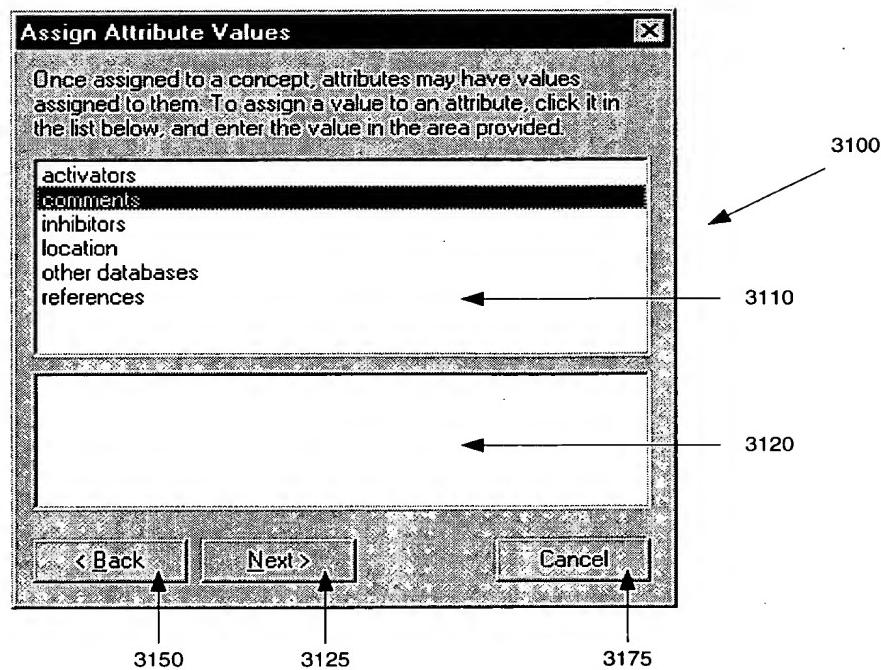


FIGURE 5I

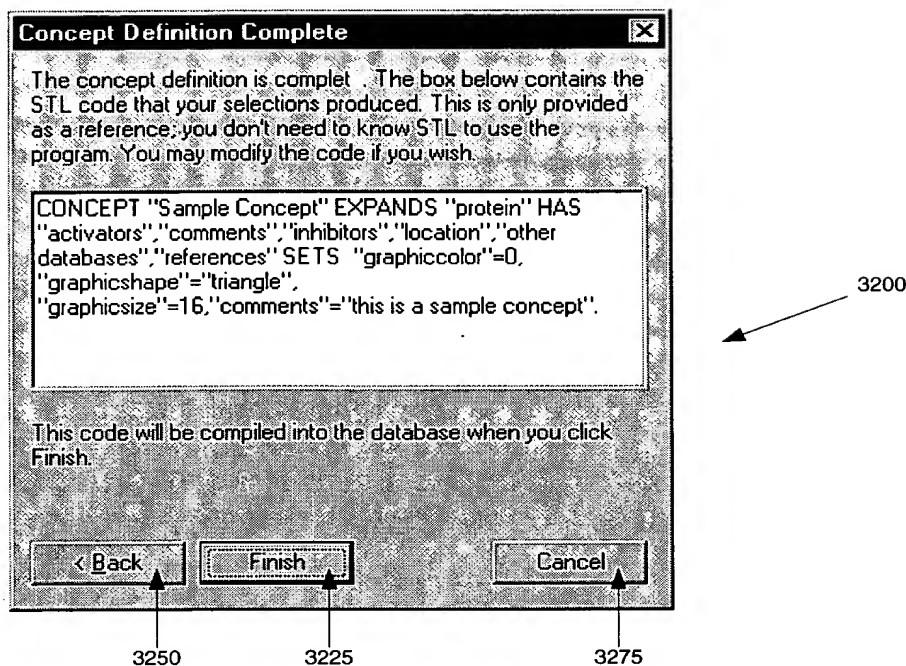
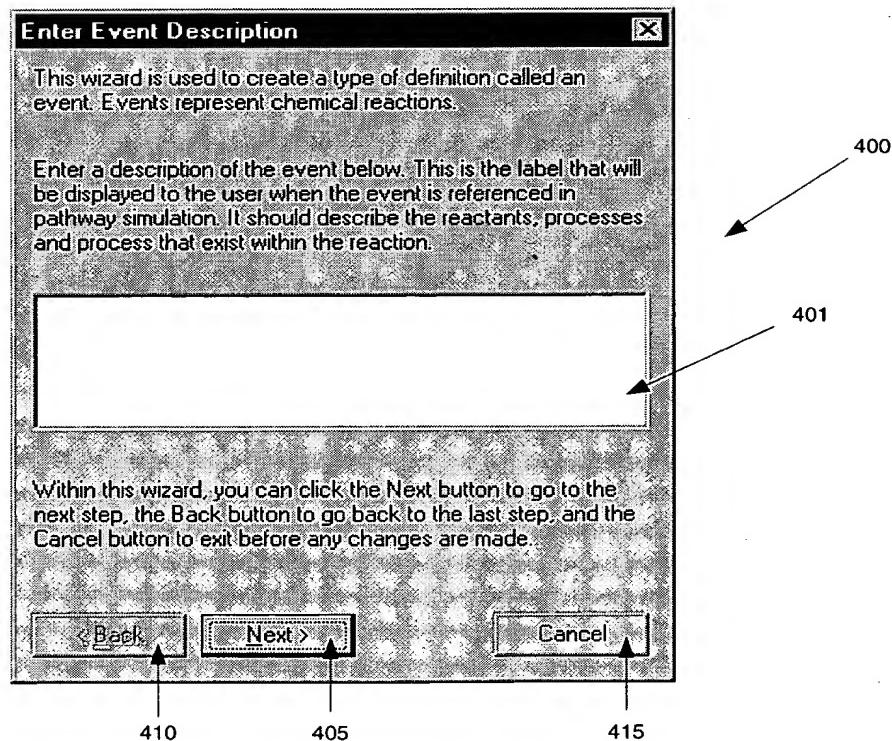
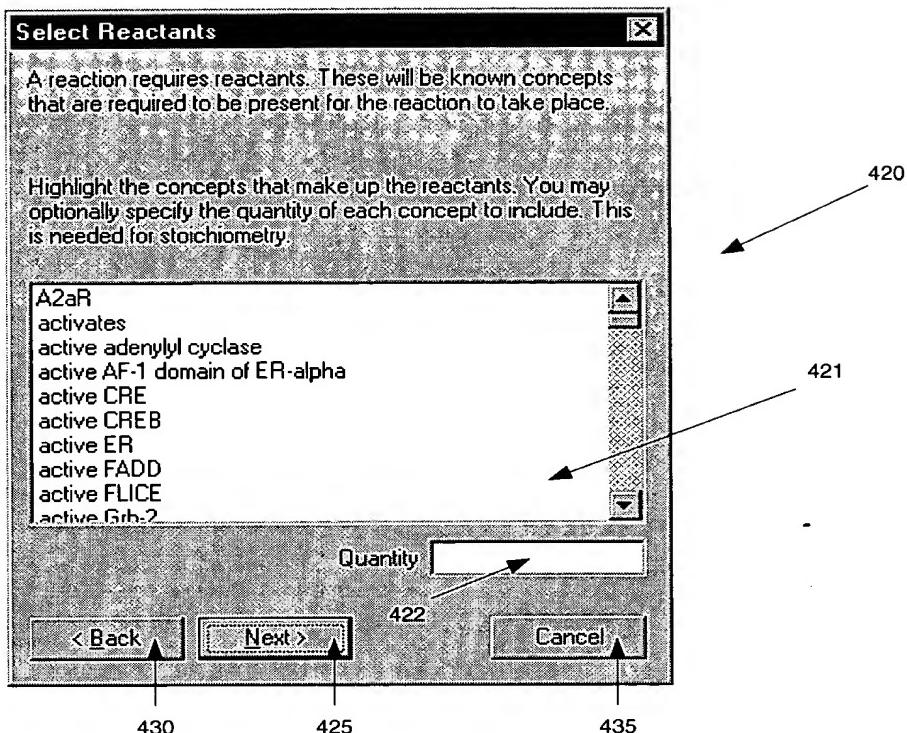


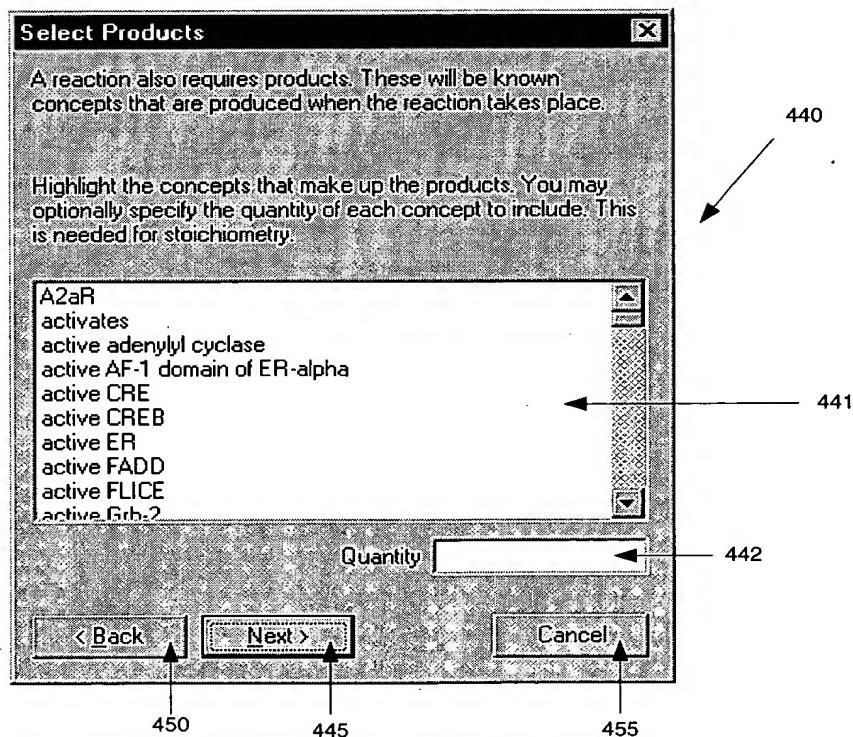
FIGURE 6A



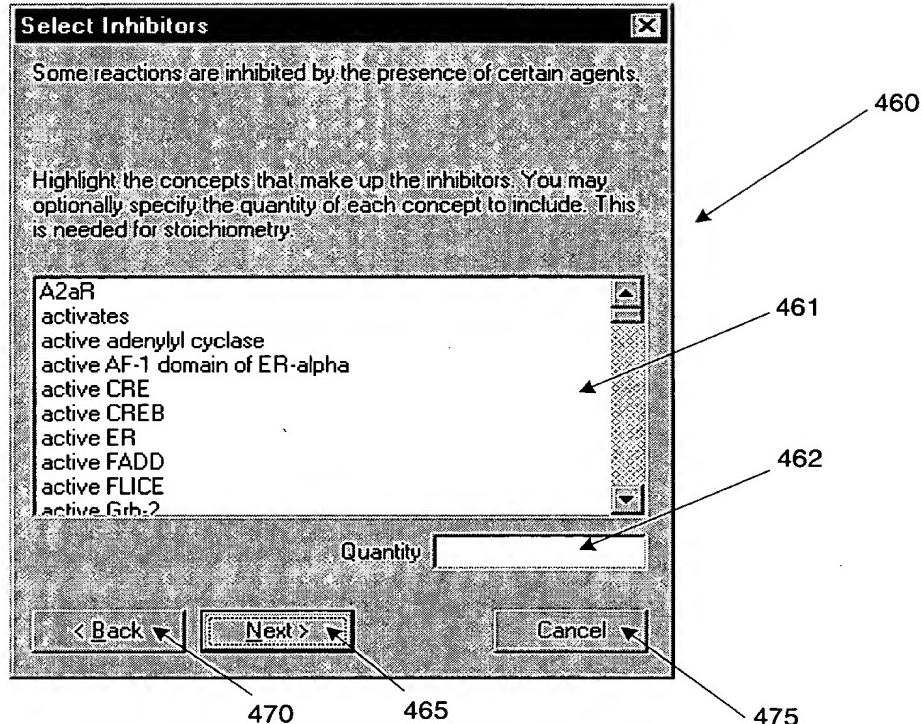
**FIGURE 6B**



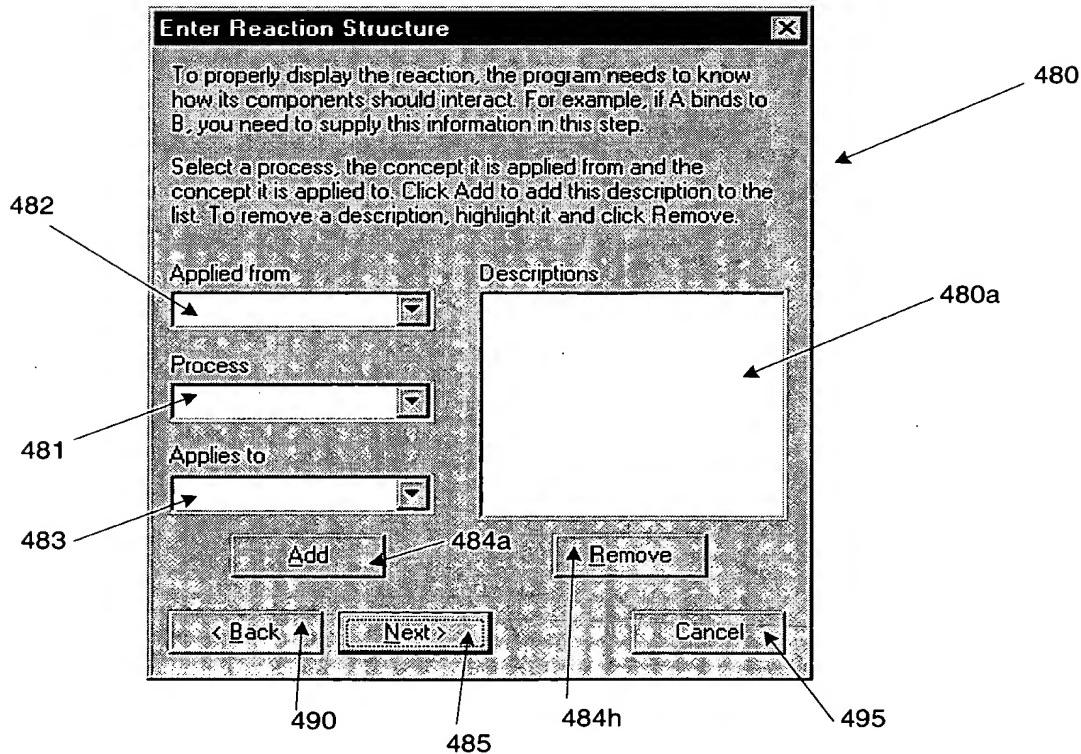
**FIGURE 6C**



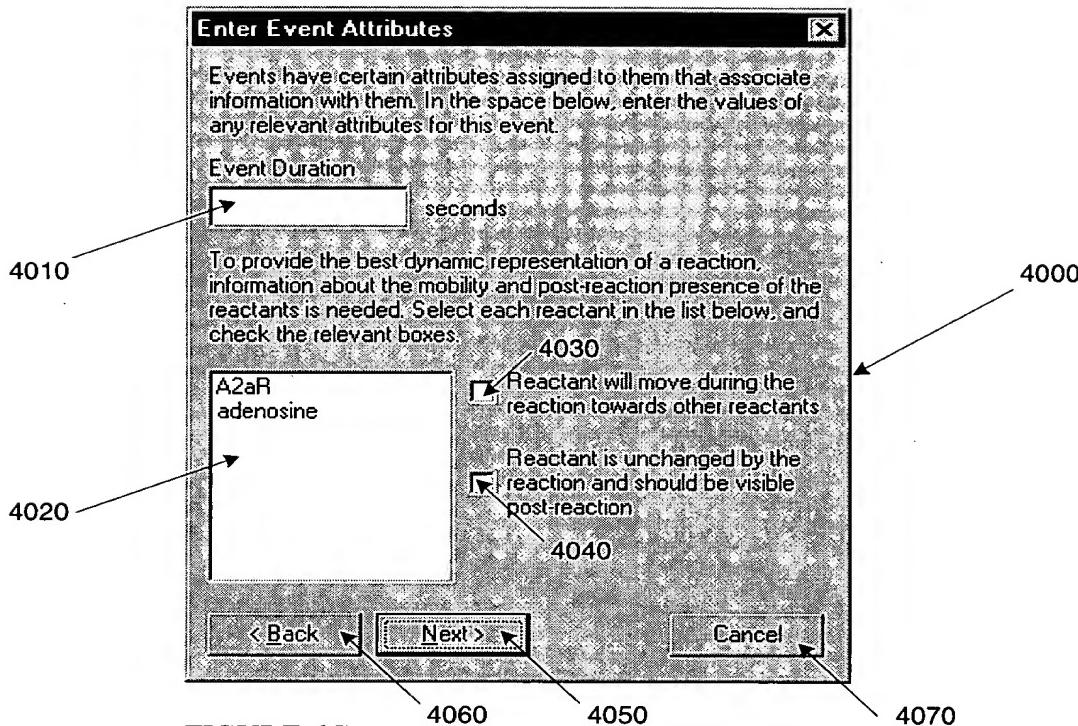
**FIGURE 6D**



**FIGURE 6E**



**FIGURE 6F**



**FIGURE 6G**

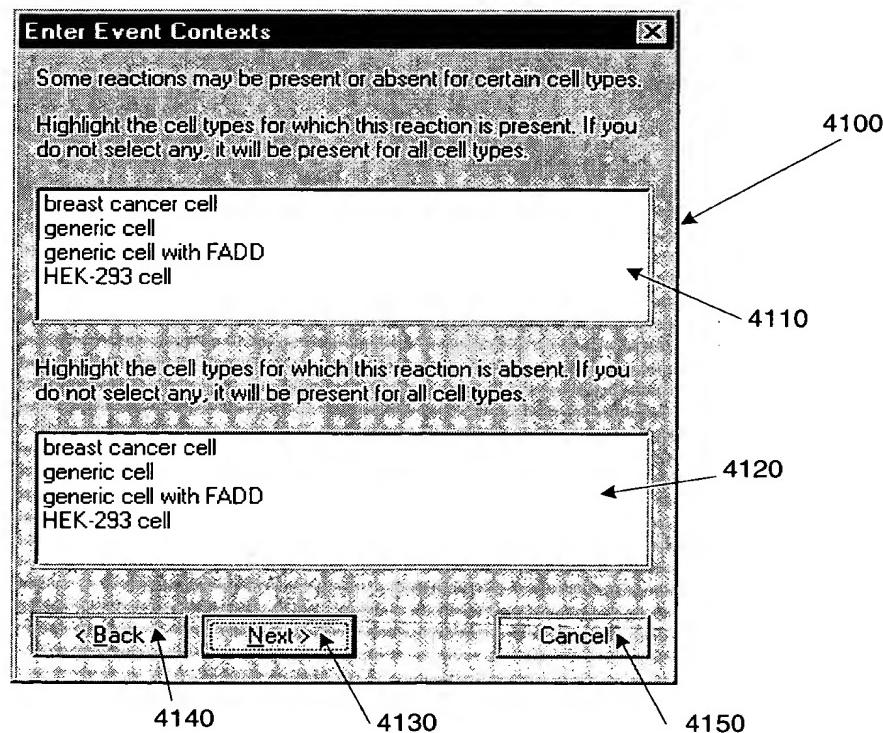


FIGURE 6H

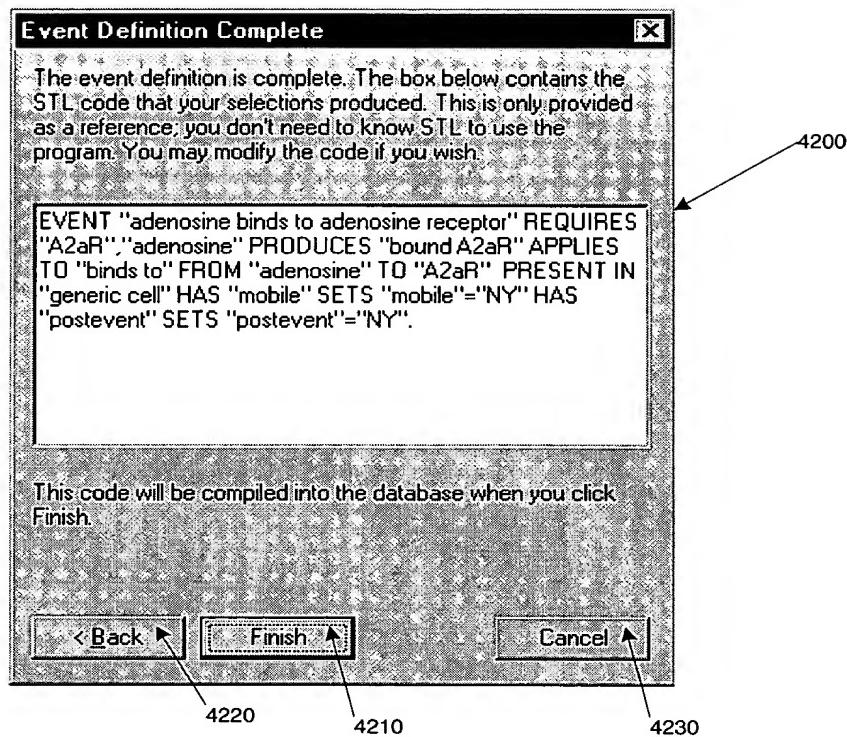
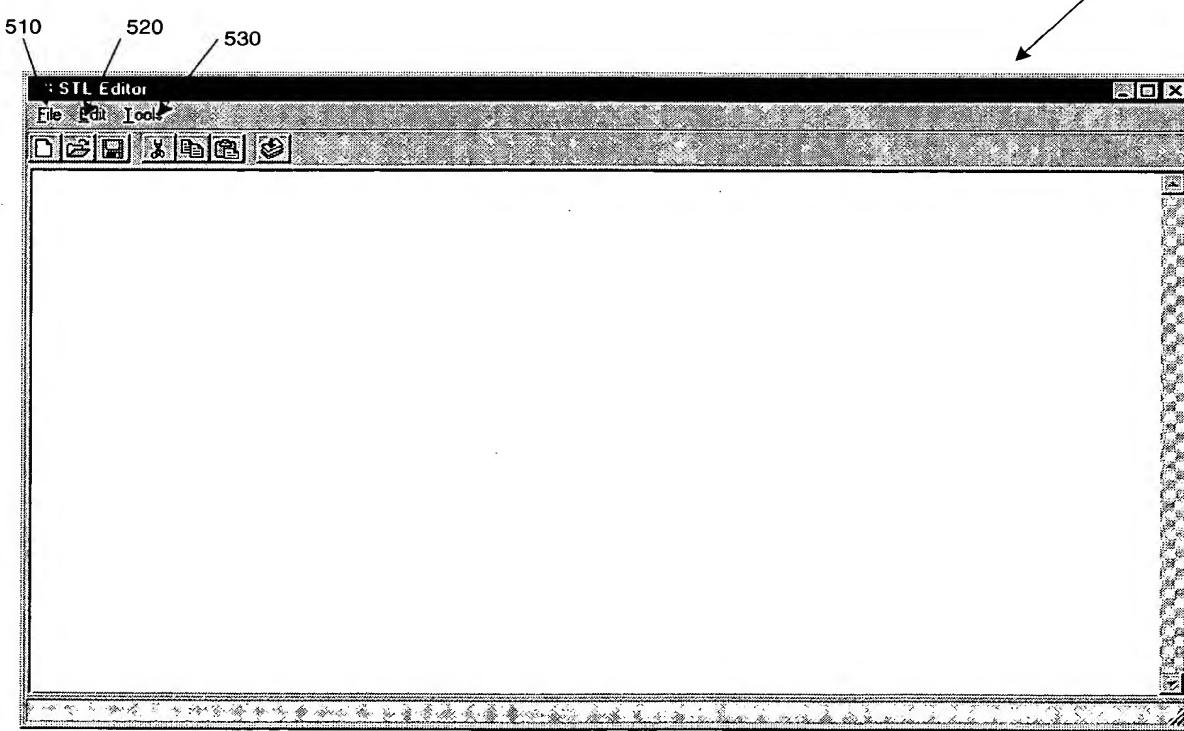
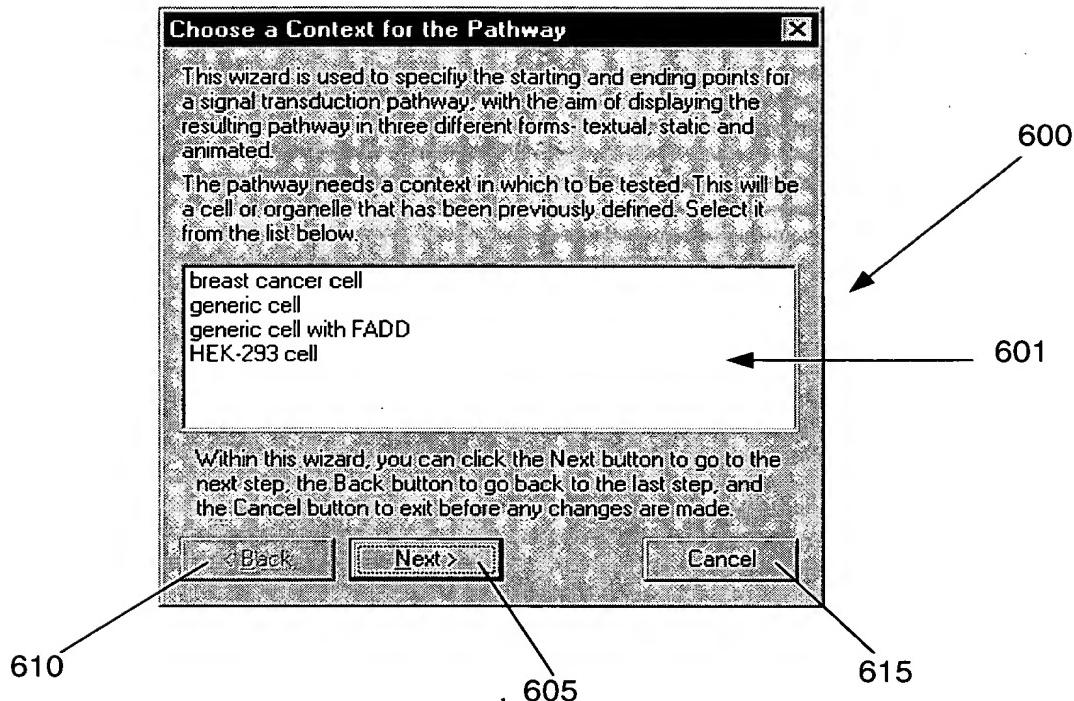


FIGURE 7



**FIGURE 8A**



**FIGURE 8B**

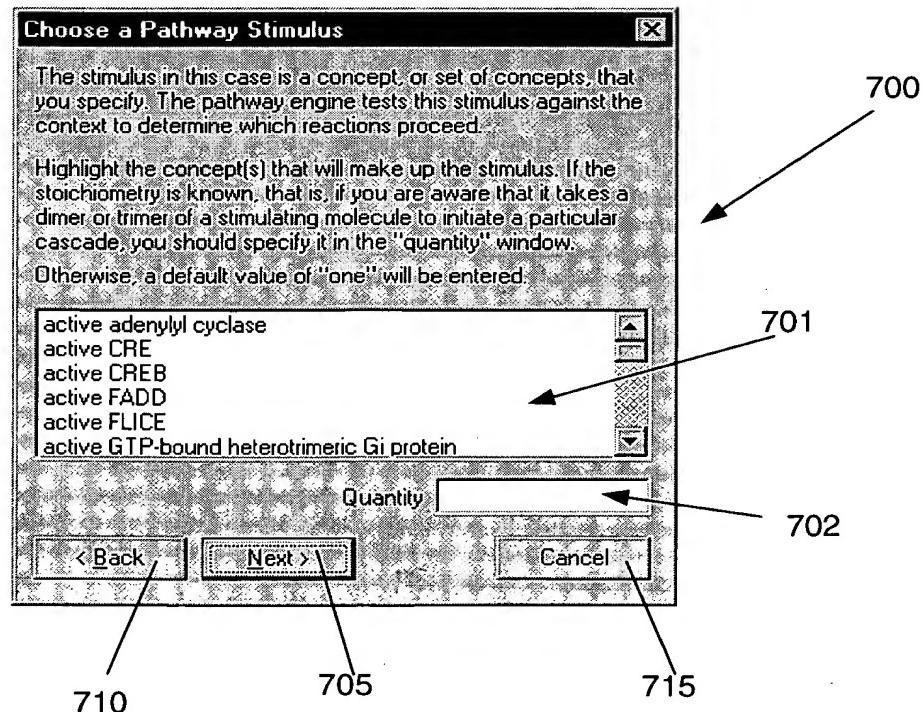
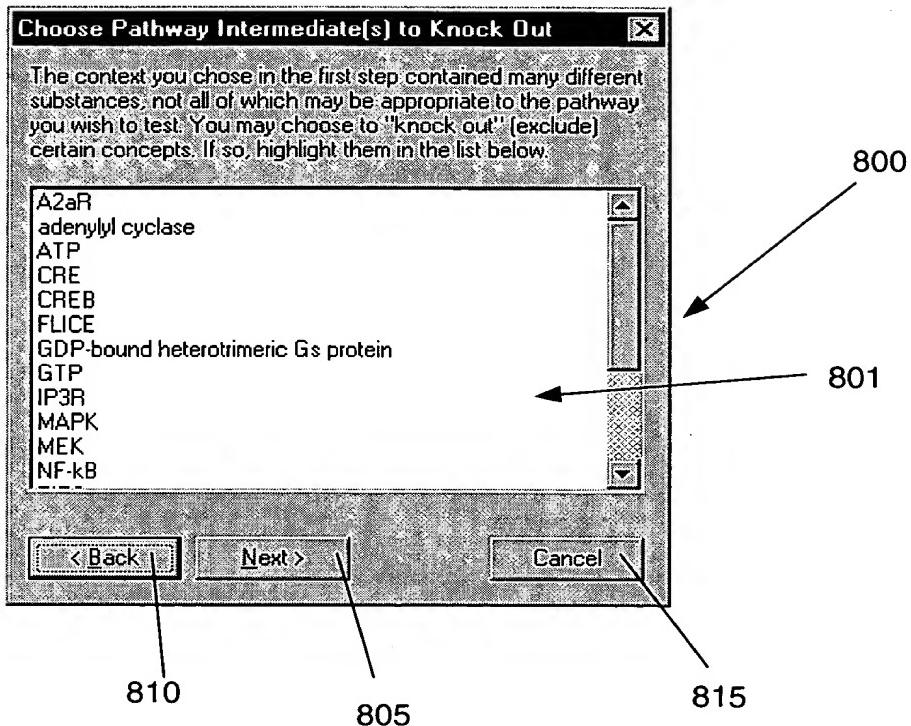


FIGURE 8C



1000 2000 3000 4000 5000 6000

FIGURE 8D

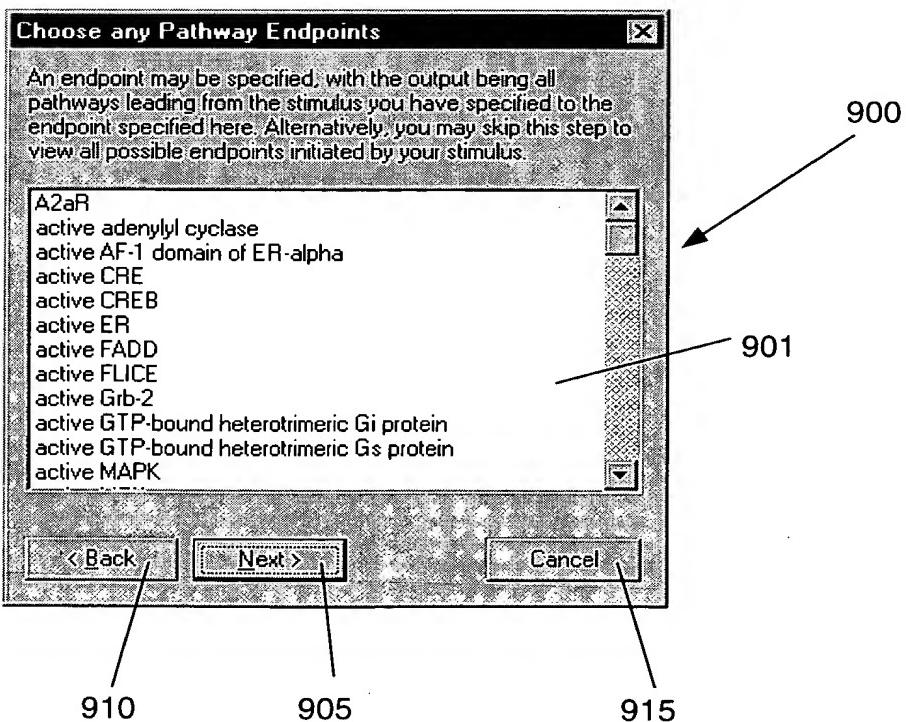


FIGURE 8E

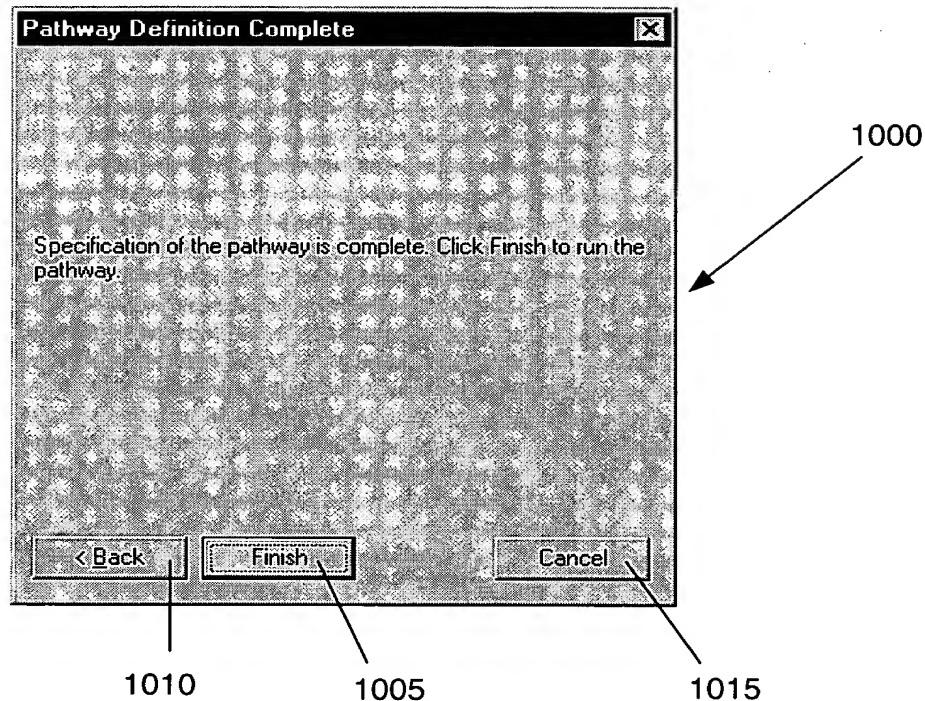


FIGURE 9

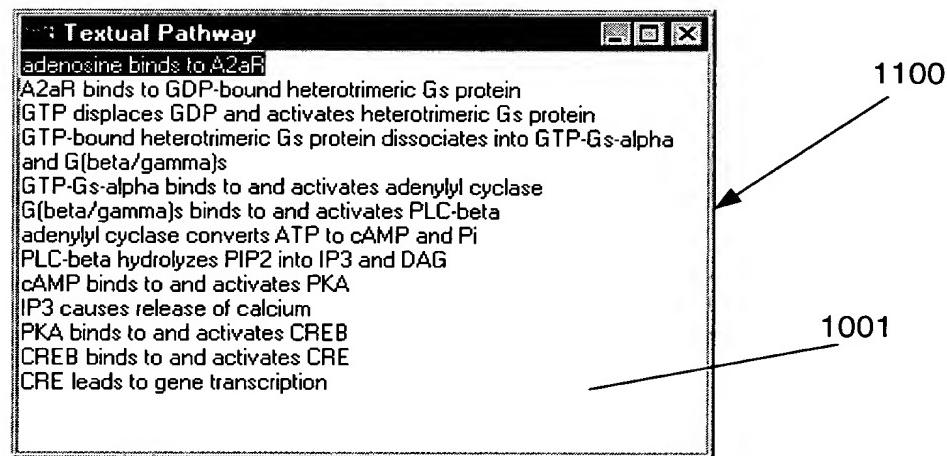
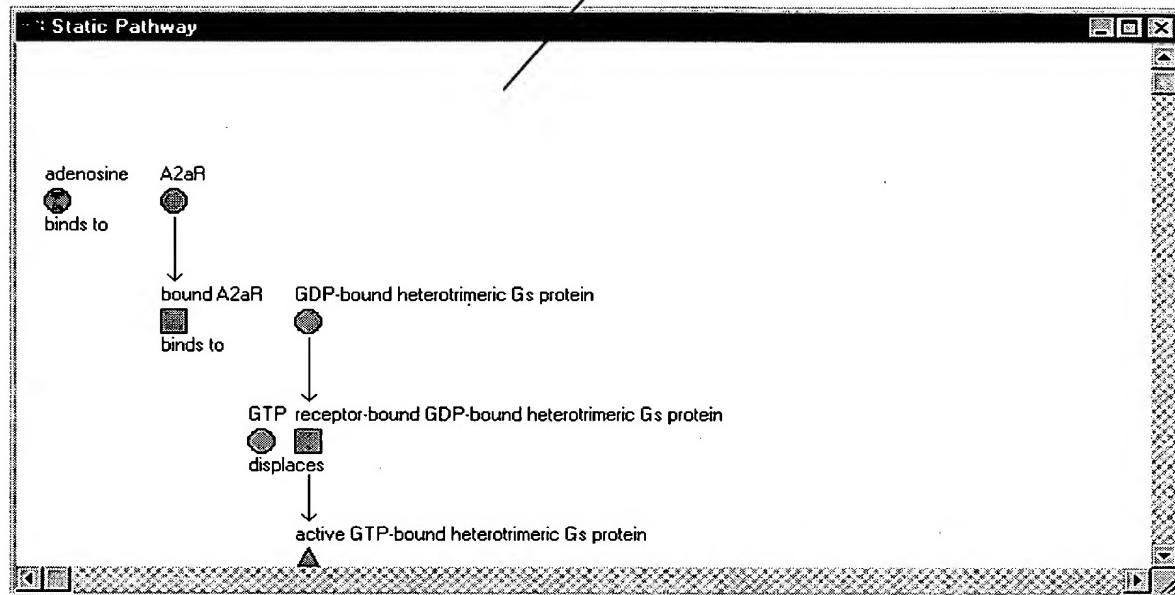


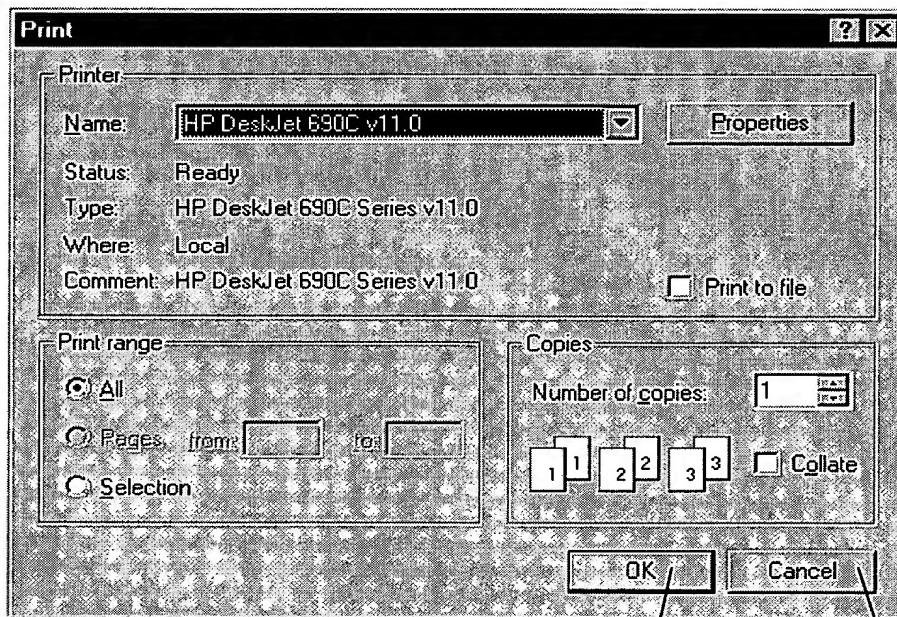
FIGURE 10A



1201

1200

FIGURE 10B



1300

1305

1315

FIGURE 11

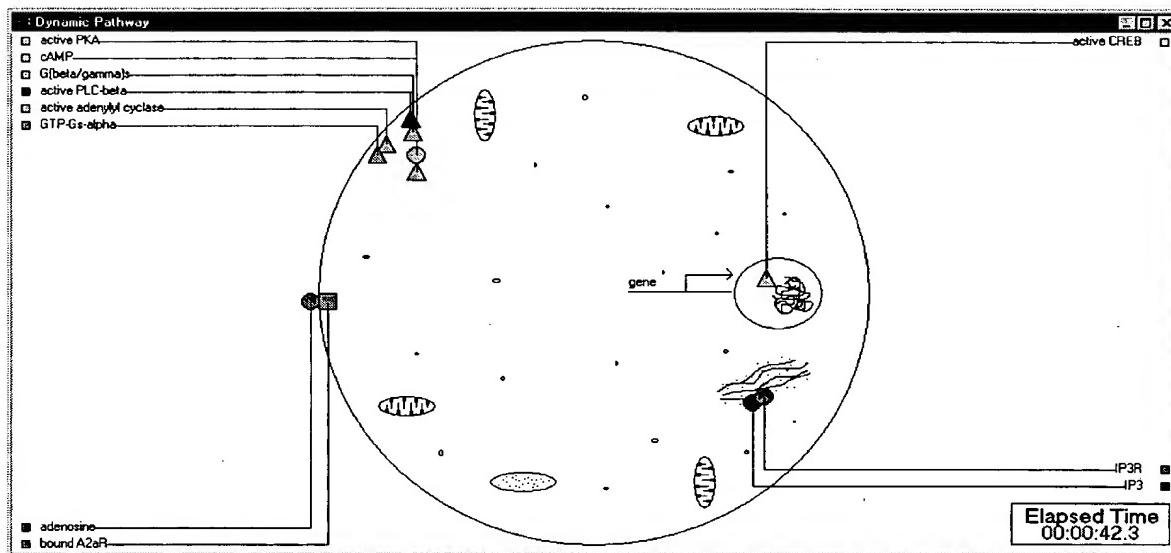
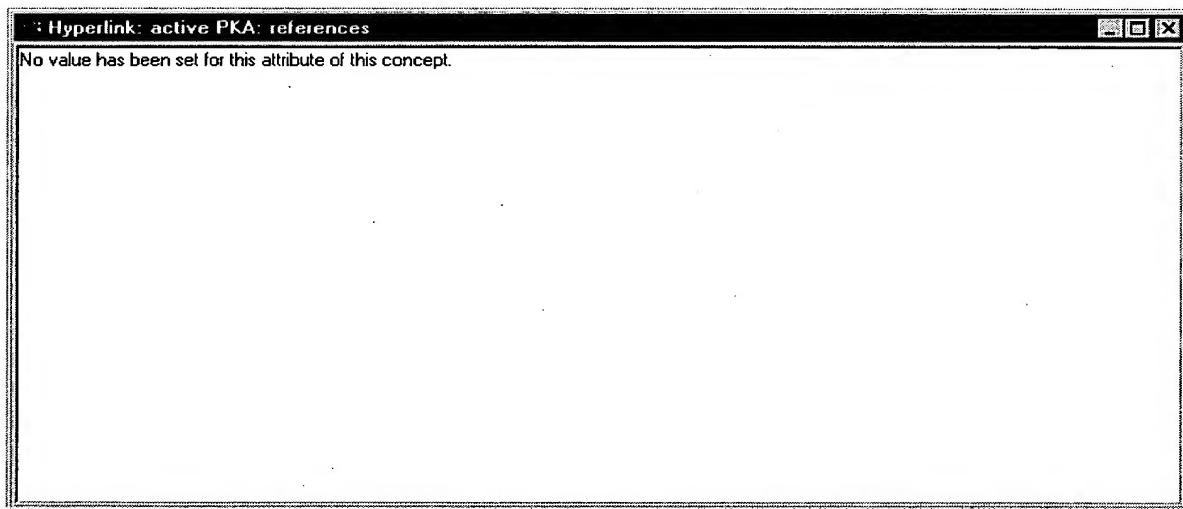
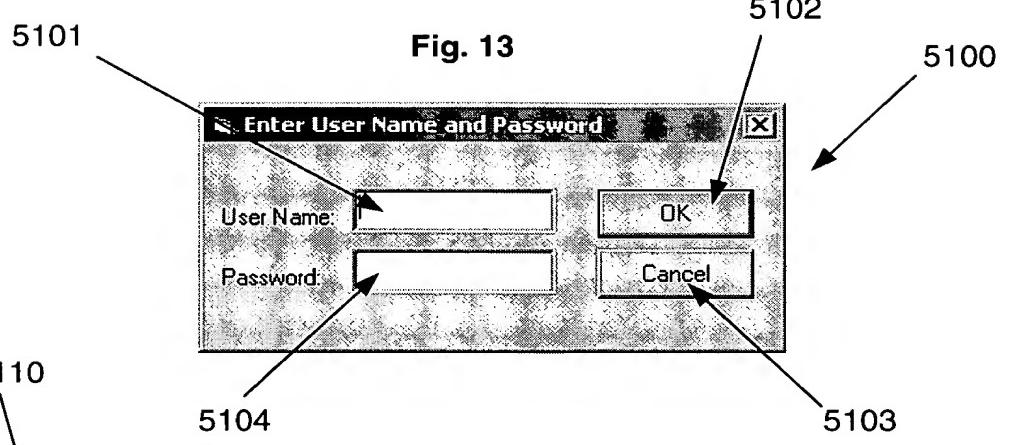


FIGURE 12





**Fig. 14**

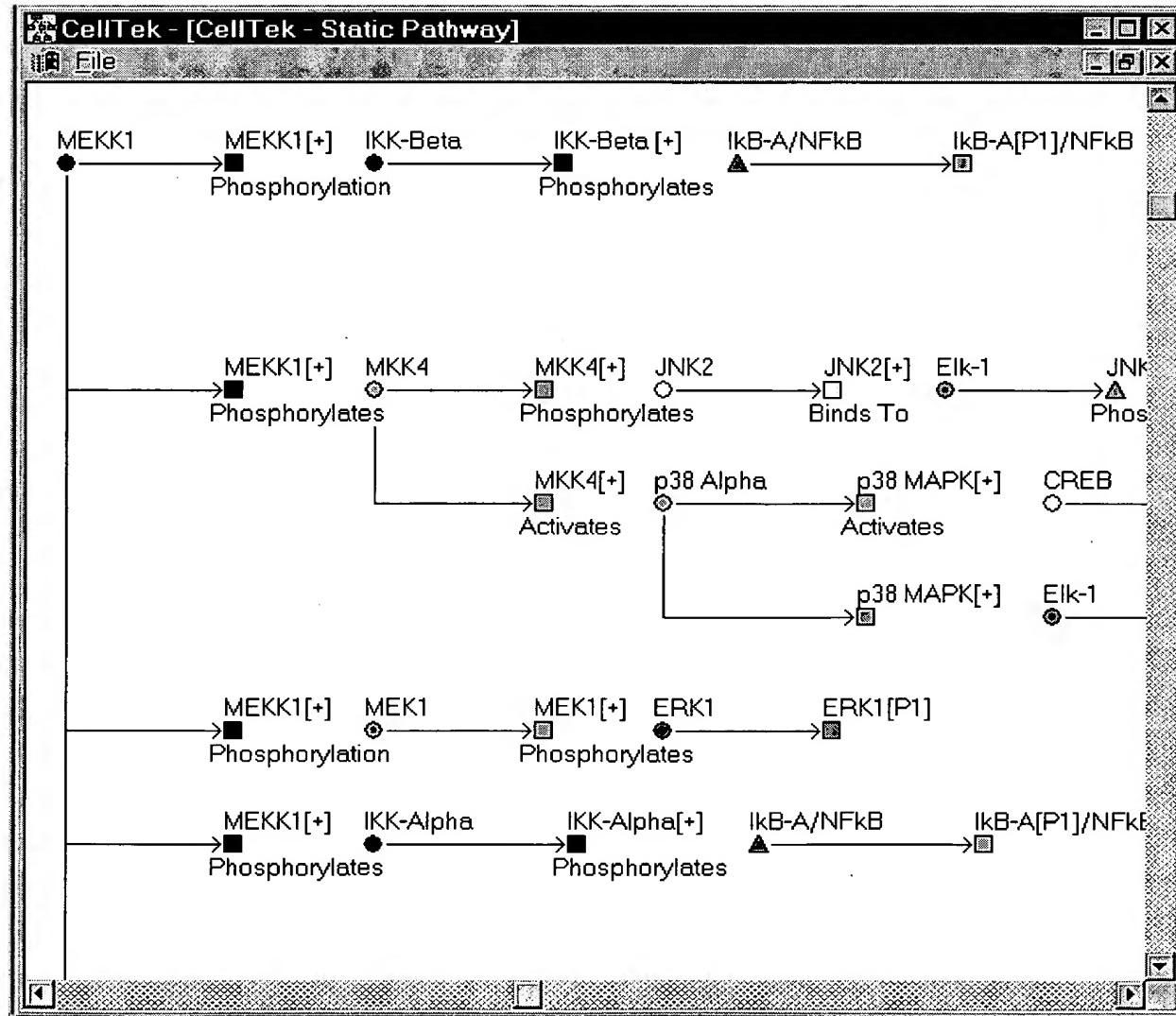
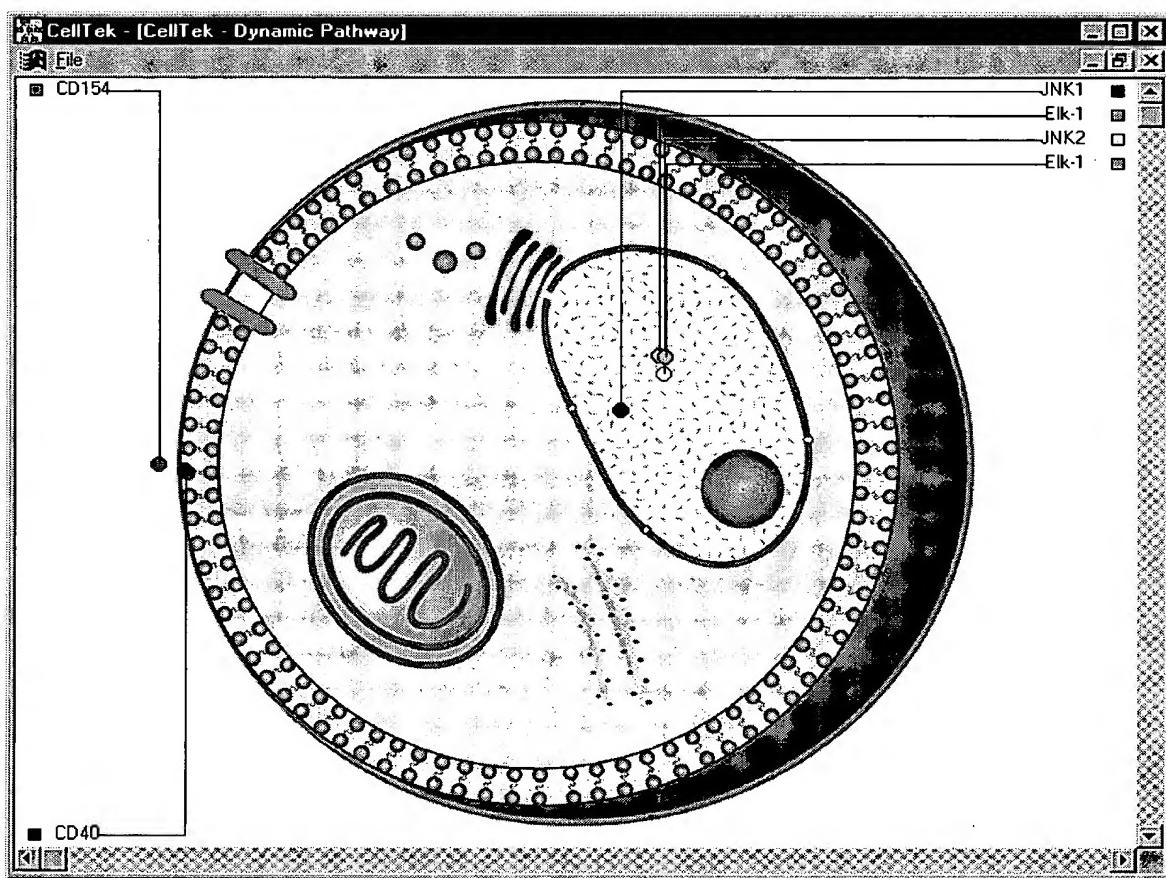


Fig. 15



**Fig. 16**

5140 →

```

CellTek - [CellTek - Textual Pathway]
File
Initial Conditions
User Name: CellTekUser
Pathway Type: Forward Pathway
Context: Immunology Test Cell
Stimulus: CD154
Exclusions: None
EndPoint: None

0 CD154 Binds To CD40
0 Inactive JNK1 Binds To Elk1
0 Inactive JNK2 Binds To Elk1

1 CD154/CD40 Binds To TRAF6
1 CD154/CD40 Binds To TRAF3
1 CD154/CD40 Binds To TRAF2
1 CD154/CD40 Binds To TRAF5
1 CD154/CD40 Leads to Lck Activation

2 TRAF6 Activates TANK
2 TRAF6 Binds To RIP2
2 TRAF2 Binds To TANK
2 TRAF2 Binds To ASK1
2 TRAF2 Binds To RIP
2 TRAF6 Binds TAK1/TAB1
2 TRAF3 Leads To Activated JNK1
2 TRAF2 Binds To MEKK1
2 TRAF5 Activates ASK1
2 TRAF5 Binds To TANK
2 TRAF6 Binds To ECSIT
2 TRAF6 Leads to Raf-1[+]
2 TRAF6 Binds to ASK1
2 TRAF6 Binds to NIK
2 TRAF2 Binds To GCK
2 TRAF6 Binds To PIP2

```

**Fig. 17**

5130 ←

```

CellTek - [CellTek - Textual Pathway]
File
Initial Conditions
User Name: CellTekUser
Pathway Type: Forward Pathway
Context: Immunology Test Cell
Stimulus: CD154
Exclusions: None
EndPoint: None

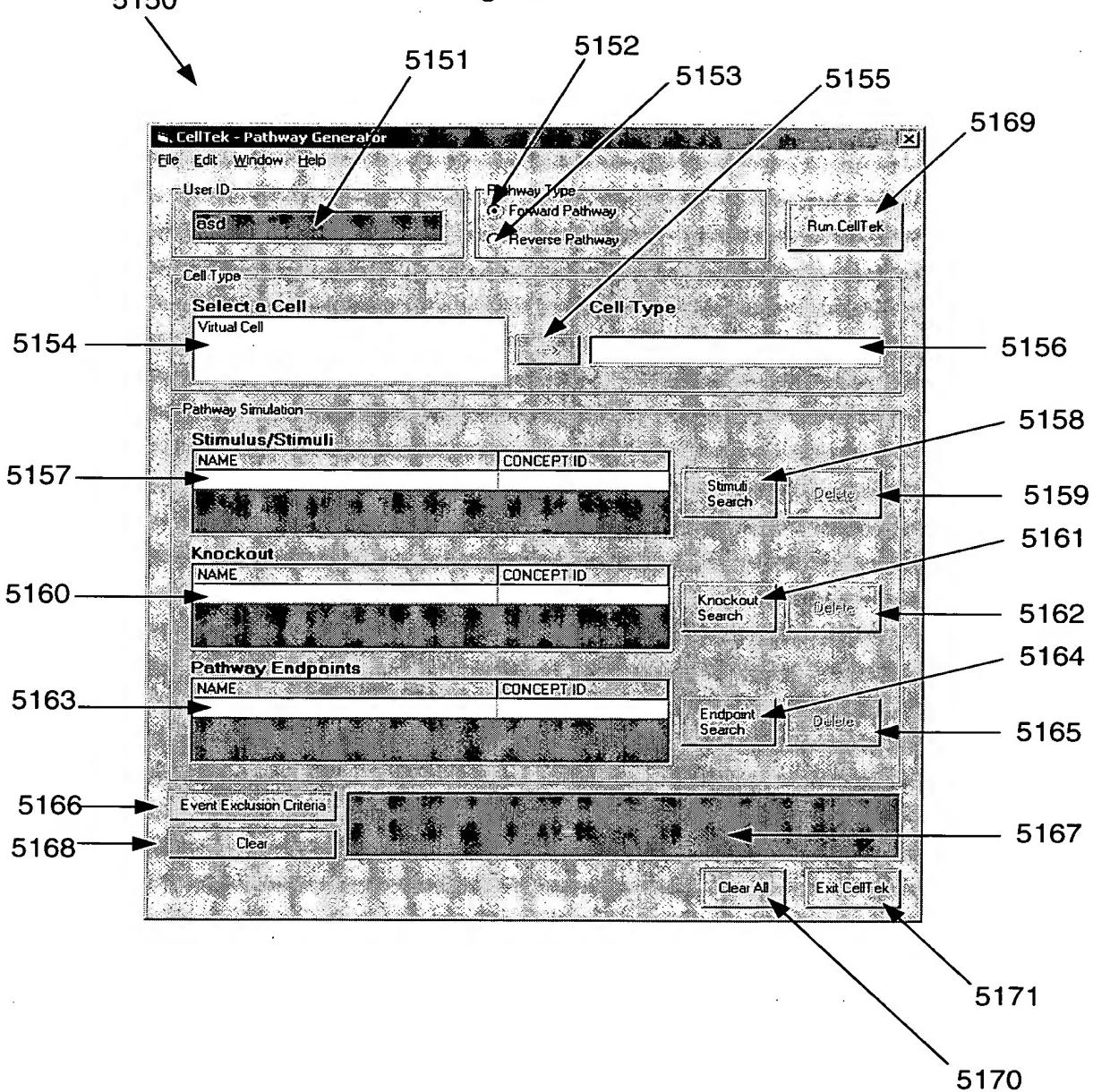
CD154 Binds To CD40
CD154/CD40 Binds To TRAF6
TRAF6 Activates TANK
TANK Interacts With TBK1
TBK1 Leads To NIK Activation
NIK Binds to IKK-A and IKK-B
NIK Phosphorylates IKK-A
Phosphorylation of IKK-A
Ubiquitination of IKB-A

CD154 Binds To CD40
CD154/CD40 Binds To TRAF6
TRAF6 Activates TANK
TANK Interacts With GCKR
GCKR Activates MEKK1
MEKK1 Activates IKK-B
IKK-B Phosphorylates IKB-A/NFKB
Ubiquitination of IKB-A

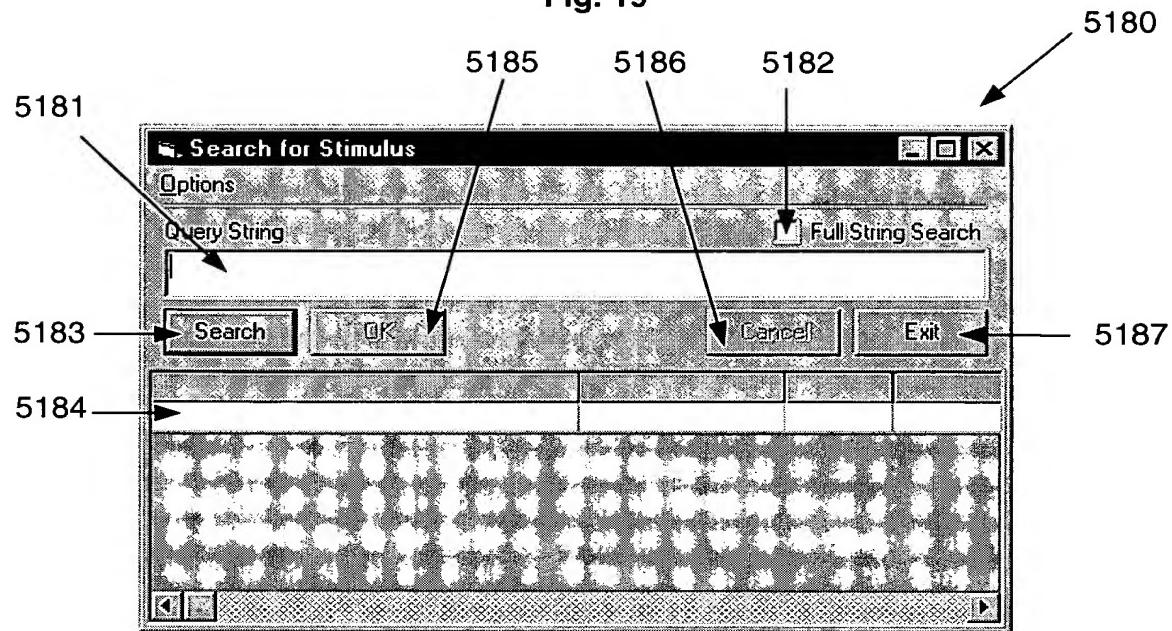
CD154 Binds To CD40
CD154/CD40 Binds To TRAF6
TRAF6 Activates TANK
TANK Interacts With GCKR
GCKR Activates MEKK1
MEKK1 Phosphorylates MKK4
MKK4 Phosphorylates IKK2

```

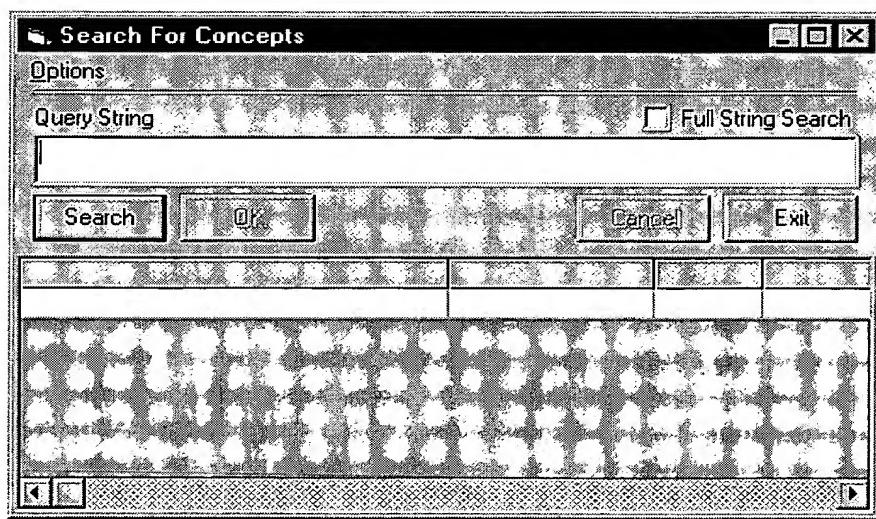
**Fig. 18**



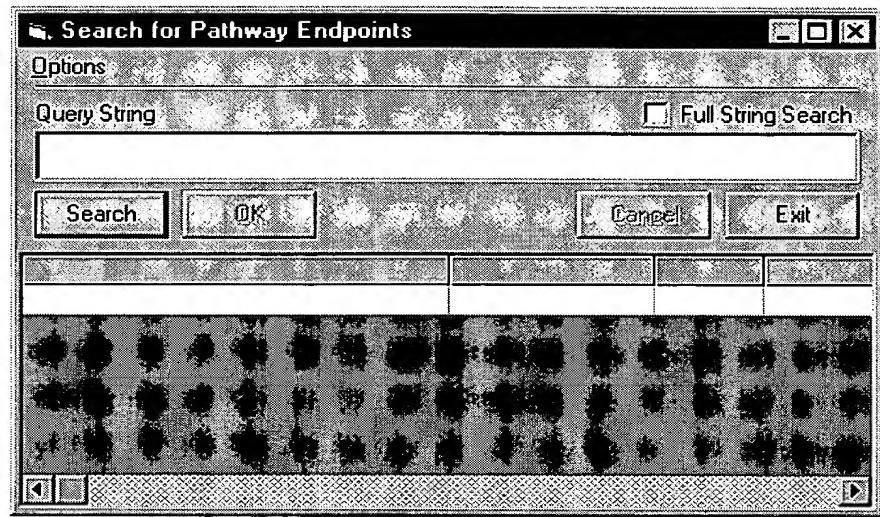
**Fig. 19**



**Fig. 20**

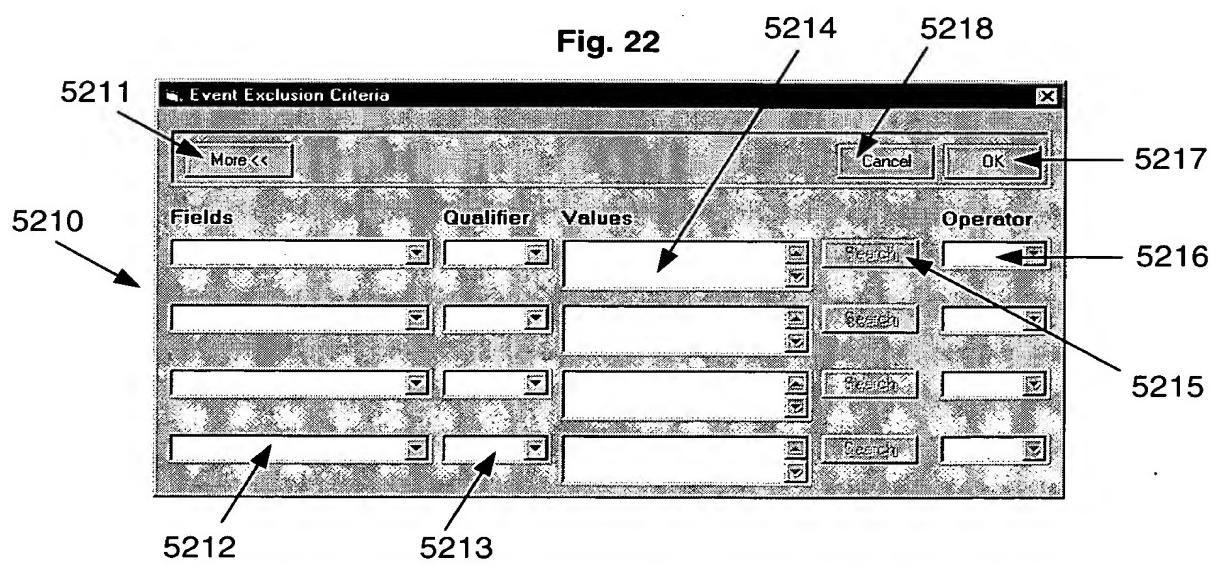


**Fig. 21**

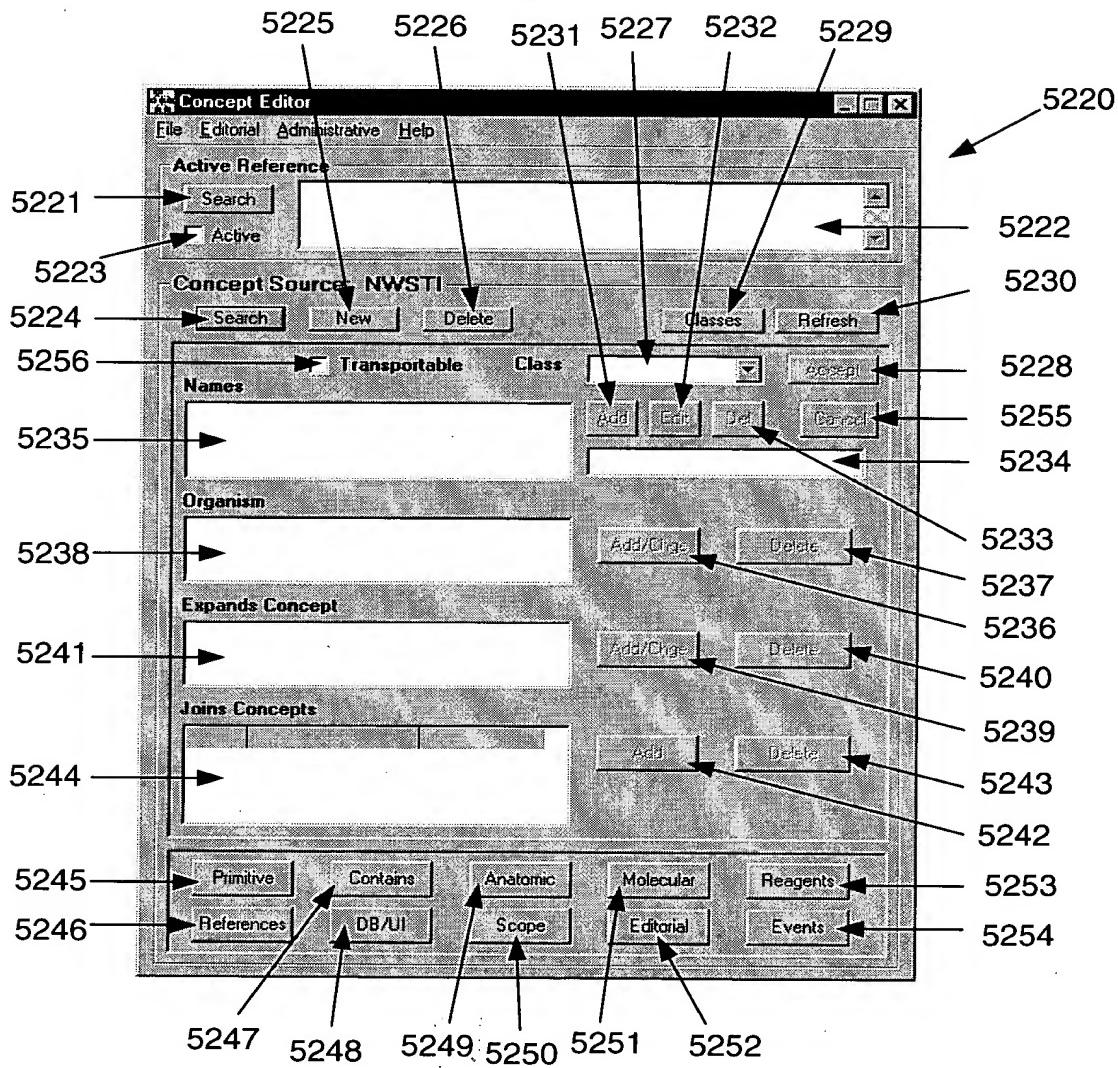


5200

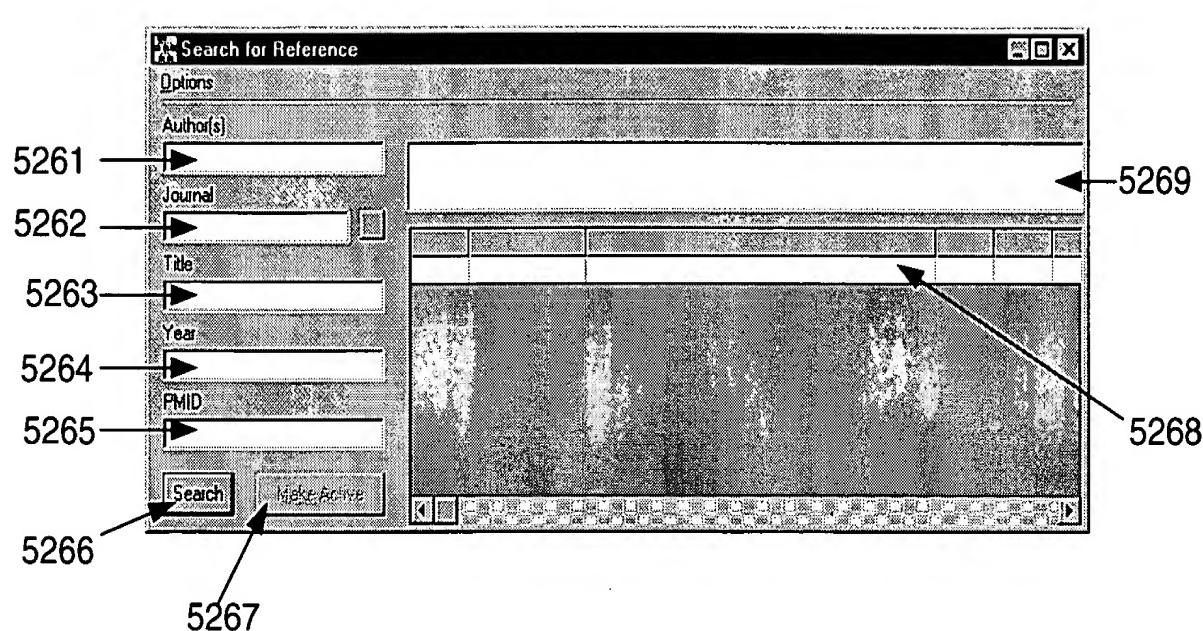
**Fig. 22**



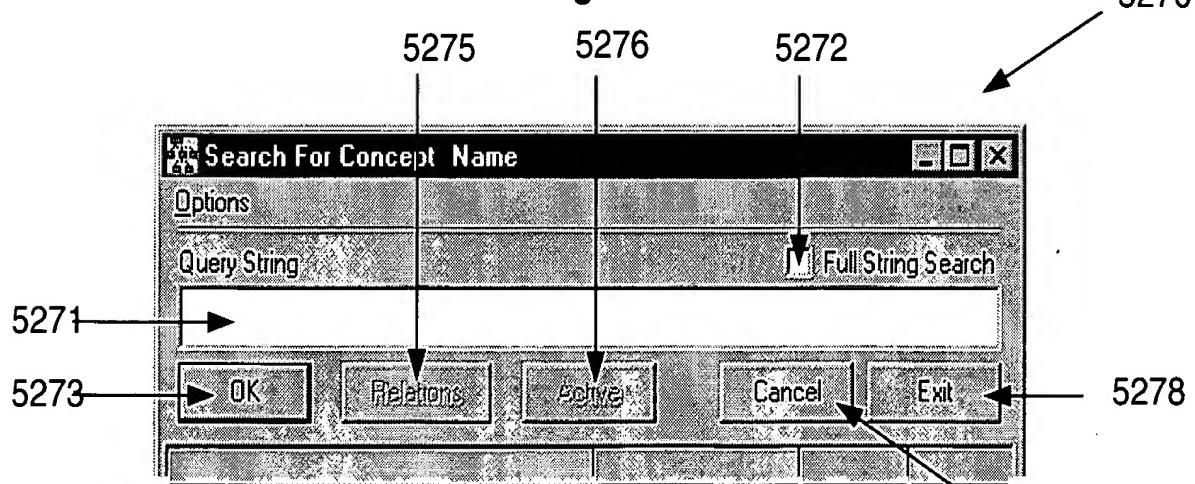
**Fig. 23**



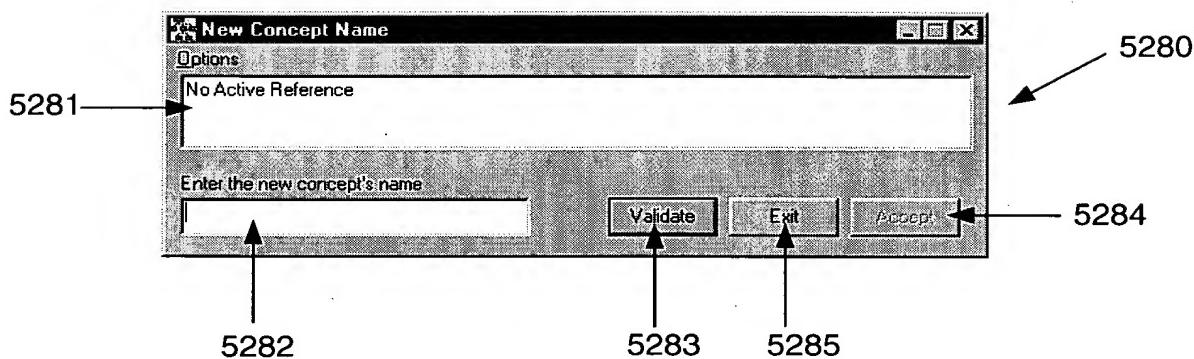
**Fig. 24**



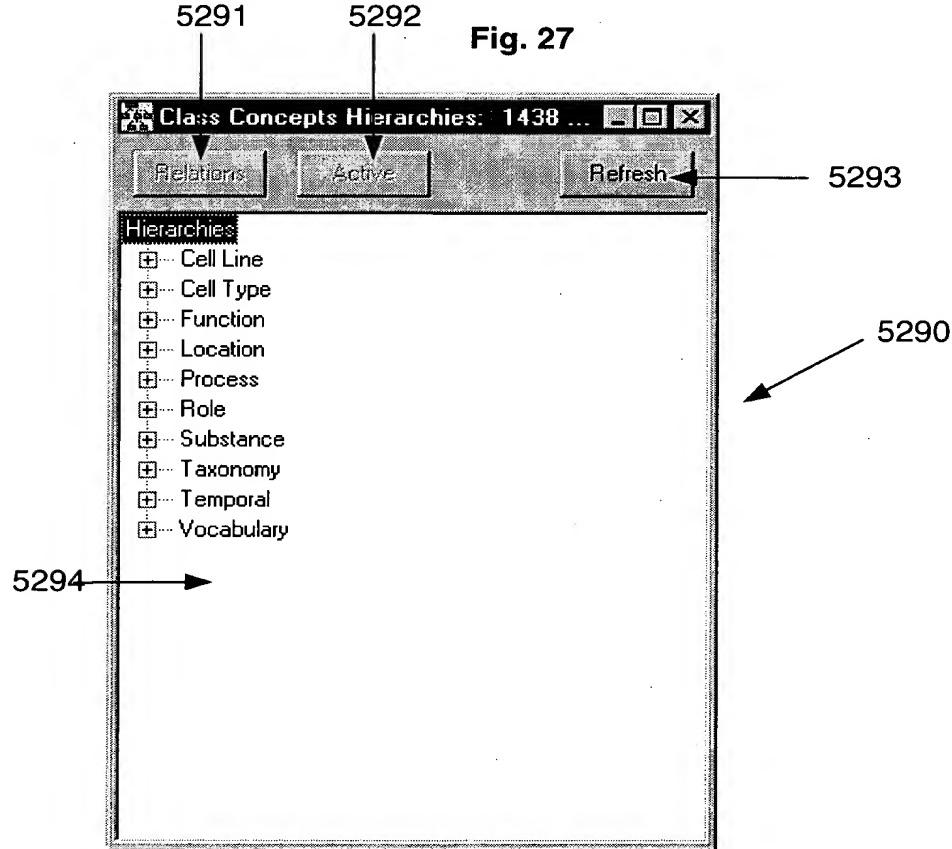
**Fig. 25**



**Fig. 26**



**Fig. 27**



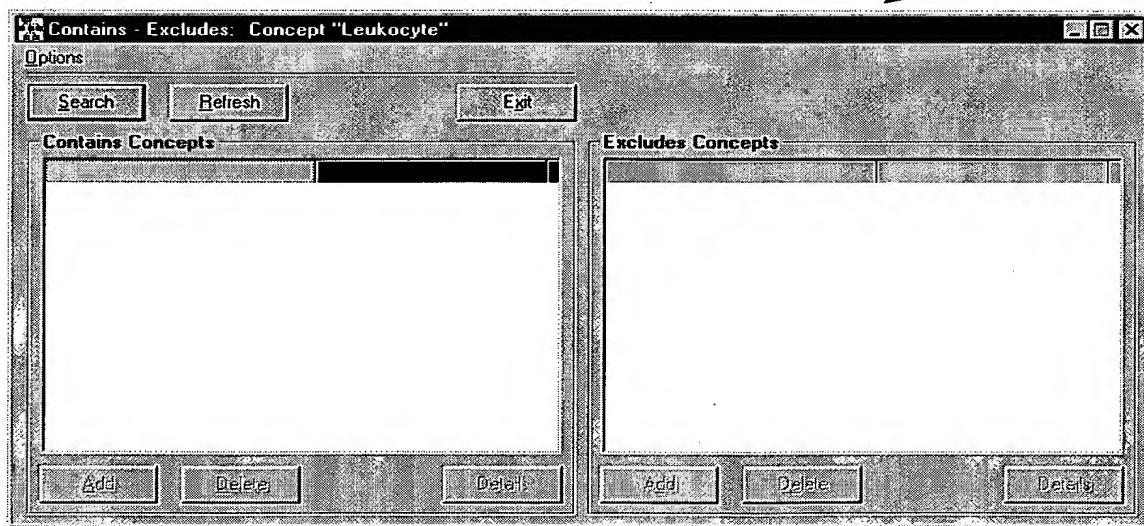
**Fig. 28**

5300

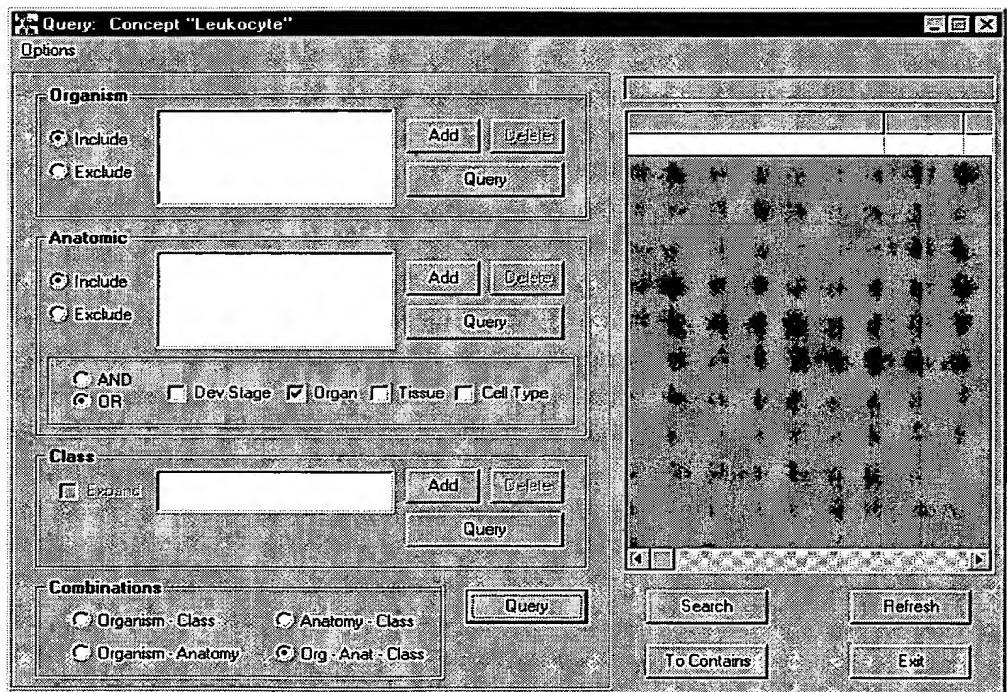
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|--|--------------|----------|
| ATT ID   | Name         | Val      |
| 5  | graphicshape | triangle |
| 6  | graphicsize  | 10       |
| 7  | graphiccolor | 4210688  |
| 11   | stimulus     | 1        |

Add  
Delete  
Refresh  
Exit

**Fig. 29**

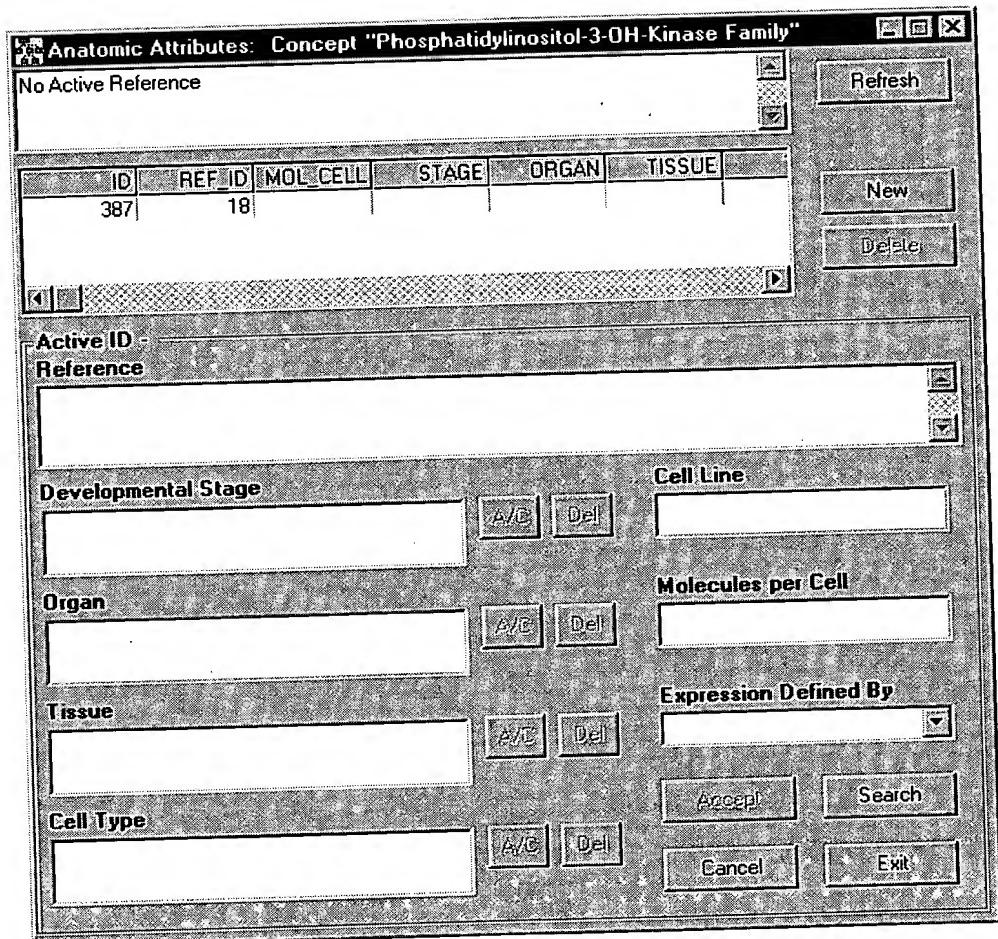


**Fig. 30**



5320

**Fig. 31**



5330

Fig. 32

5340

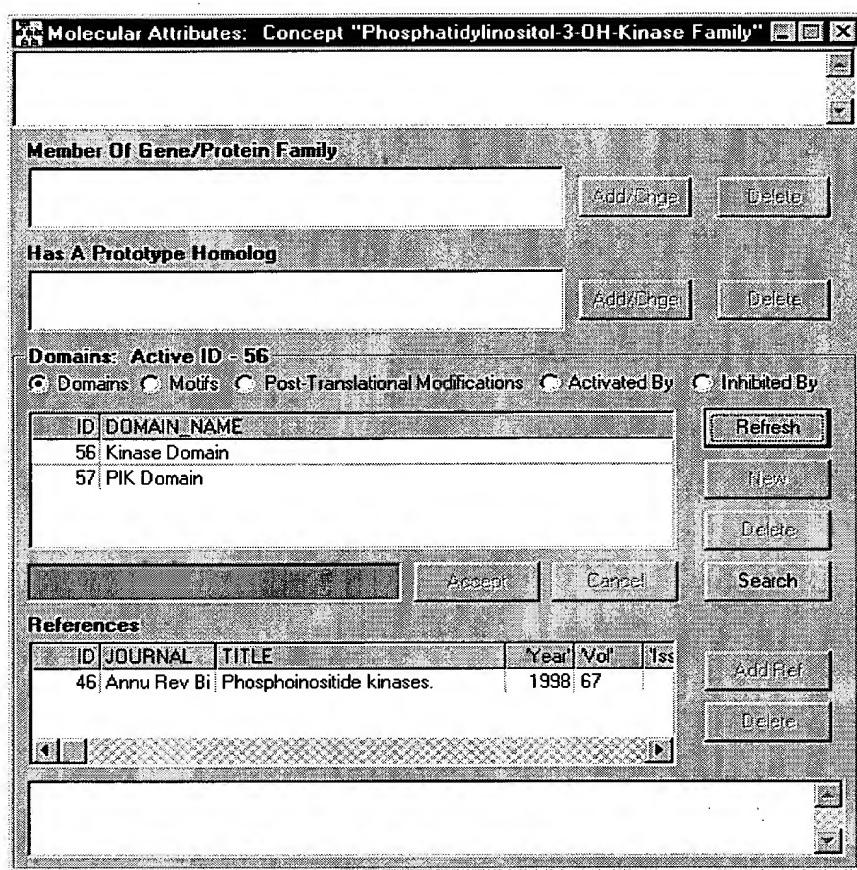
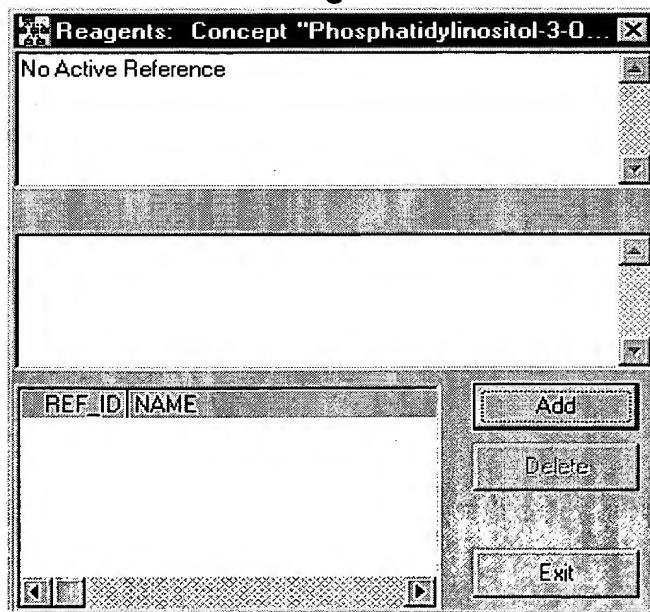


Fig. 33

5350



5360

Fig. 34

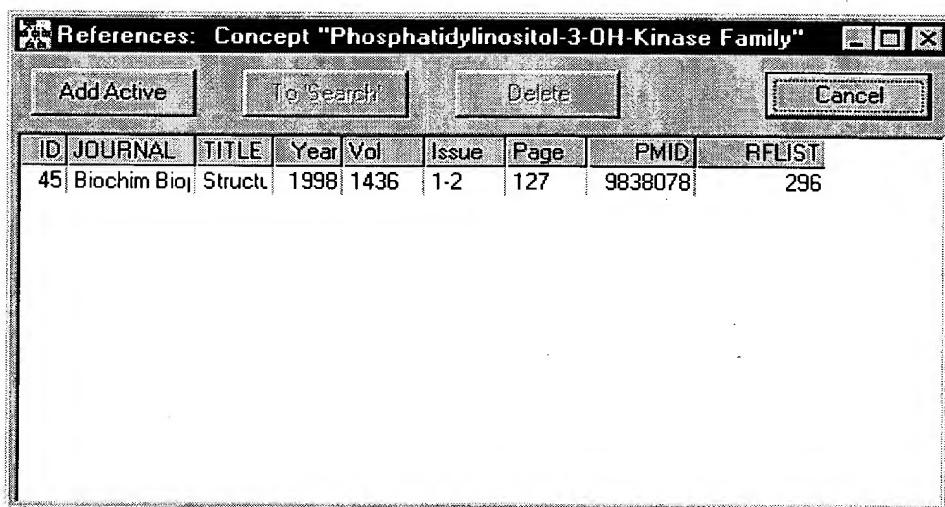
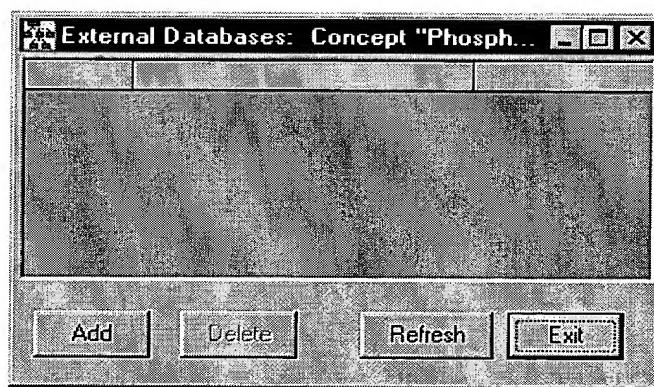


Fig. 35



5370

5380

Fig. 36

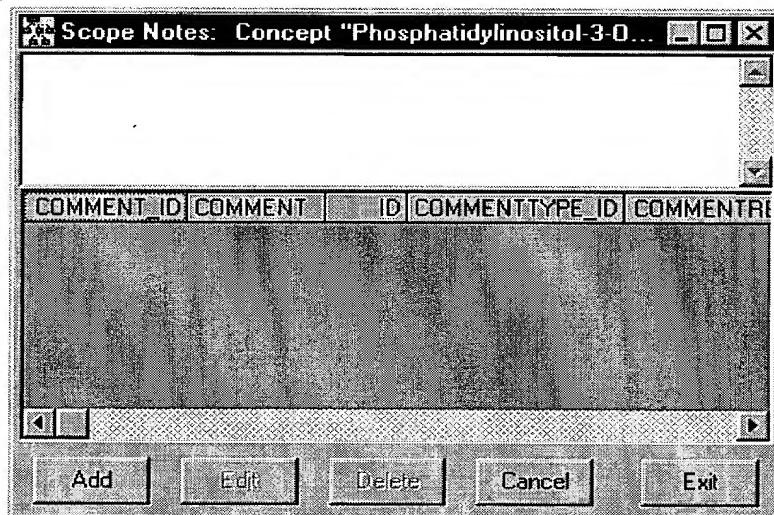
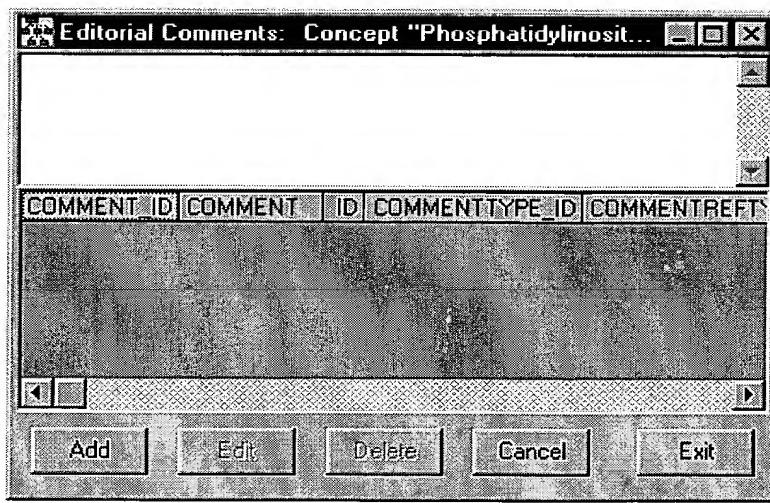
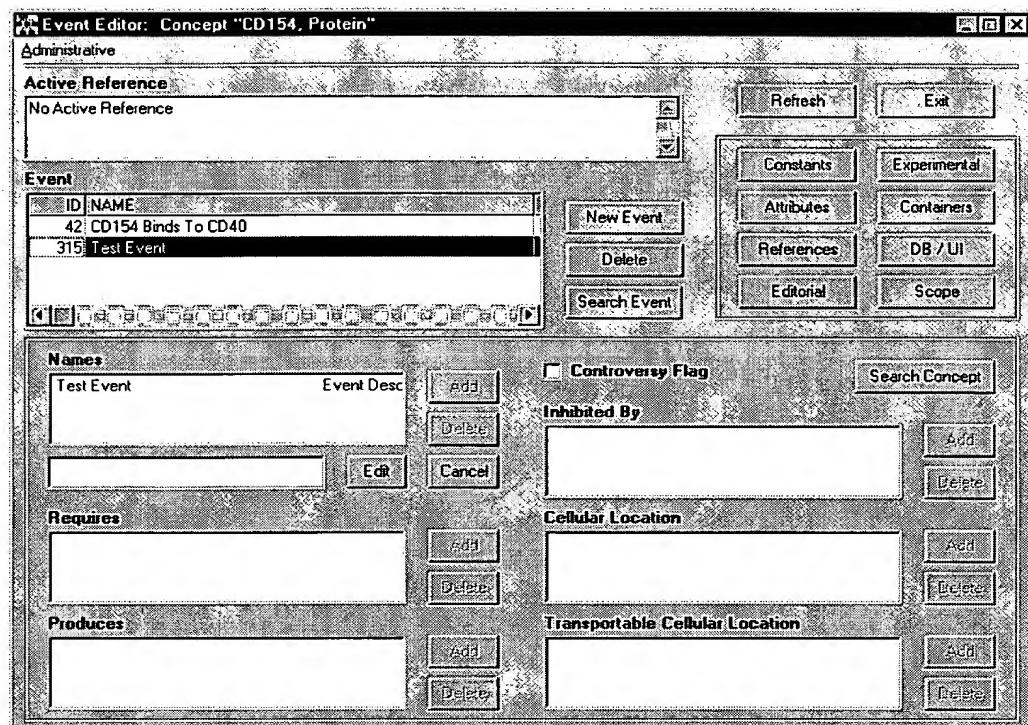


Fig. 37



5390

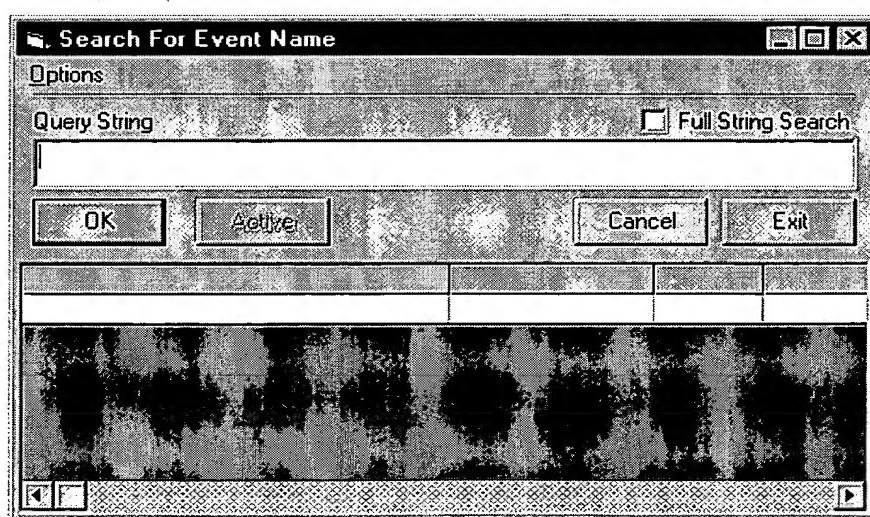
**Fig. 38**



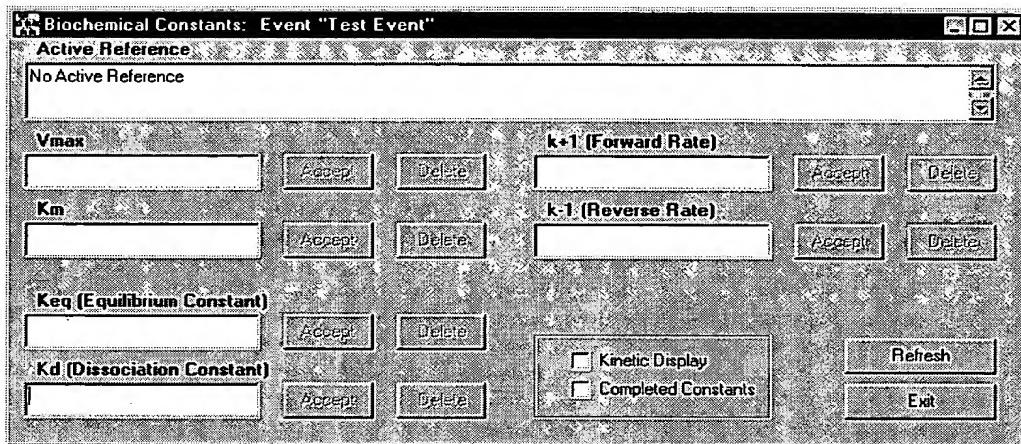
5405

5400

**Fig. 39**



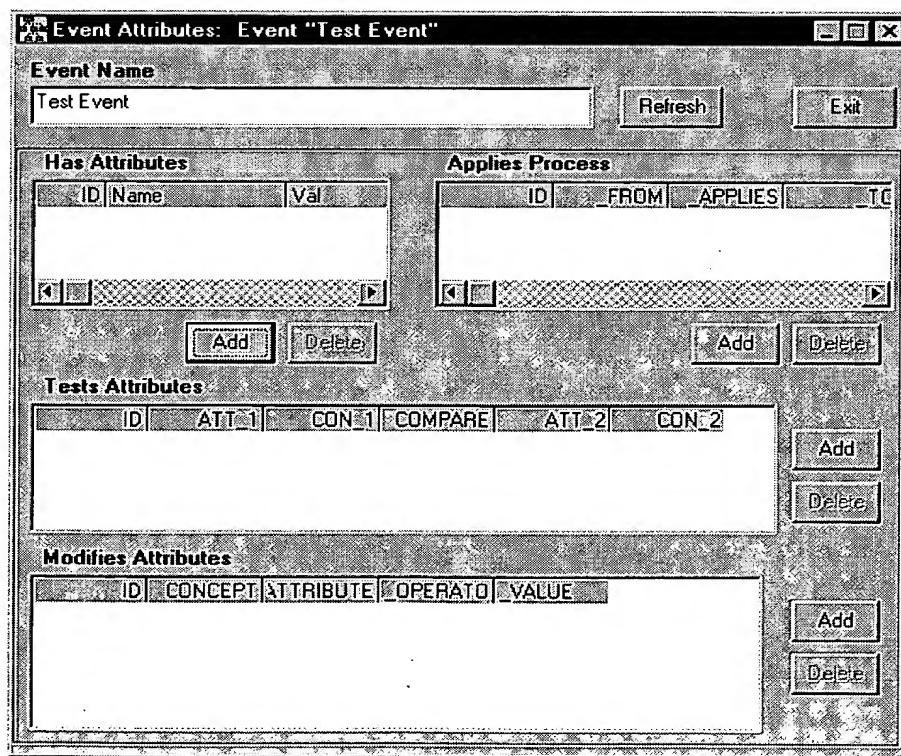
**Fig. 40**



5410

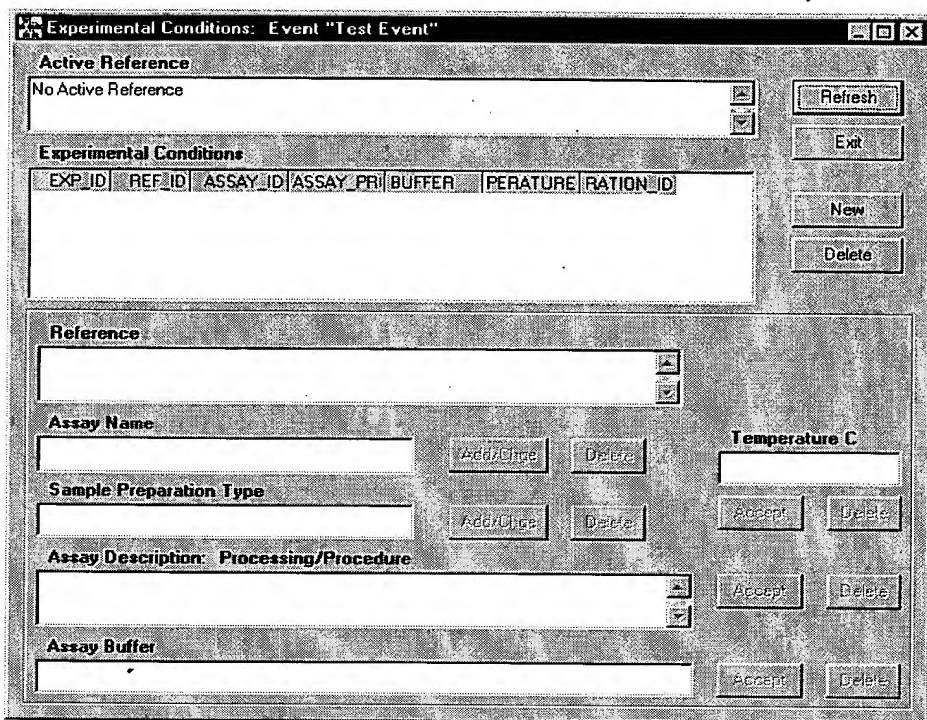
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**Fig. 41**



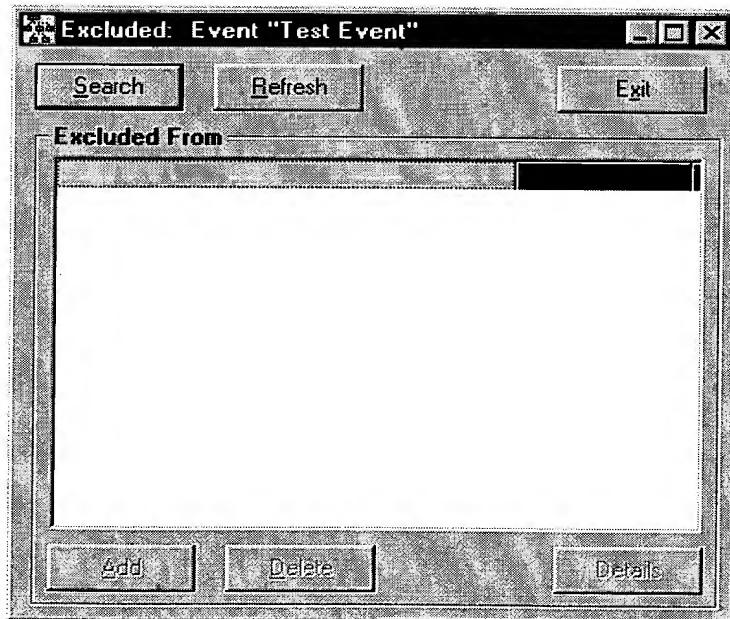
15430

Fig. 42



5440

Fig. 43



2025 RELEASE UNDER E.O. 14176